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The Use of Home Visits in Teaching Psychological Attitudes to Medical Students.....*Thais M. Fisher, Ian Stevenson*

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American Medical Association, Annual Meeting—June 6-10; Atlantic City, N. J.

American Pharmaceutical Association, Annual Convention—May 1-7; Miami Beach, Fla.

American Psychosomatic Society—May 4 and 5; Claridge Hotel, Atlantic City, N. J.

American Tuberculosis Society—May 23-27; Milwaukee.

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Catholic Hospital Association—May 16-19; Kiel Auditorium, St. Louis.

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National Tuberculosis Association, 51st Annual Meeting—May 23-27, Milwaukee, Wis.

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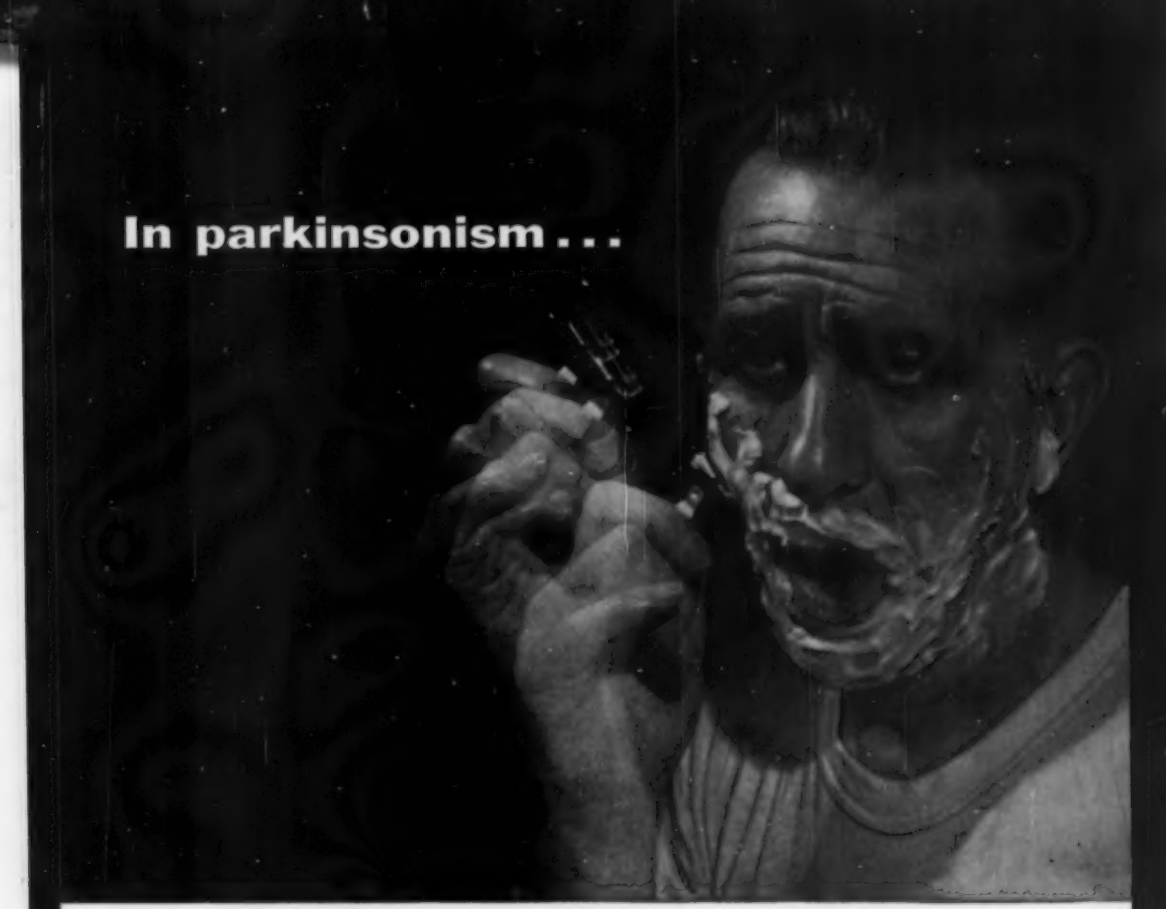

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Anatomy and the Government in Sweden

EARL ELDRED

ALTHOUGH RECENTLY the prospects for overall socialization of medicine in the United States have waned considerably, this does not imply that governmental support of medical schools, which has increased so prominently in the last decade, is lessening. Judging from the spirited discussions which appear in the Journal of MEDICAL EDUCATION, this support is not considered by everyone to be an unmixed blessing, the chief objection being that with the funds will come increased bureaucratic regulations.

What ultimate form this development will take in America is probably unpredictable; nevertheless, it is informative to study the experiences of others who are farther along this path. Commentaries in this vein have appeared from England, New Zealand and elsewhere; the present account concerns Sweden and is especially restricted to the relationship between the state and the basic medical science of anatomy.

It is especially timely to comment upon Swedish medicine, for only last year the Committee on Medical Education (Läkarutbildingskommitté), which for several years has been studying the whole structure of medical education in Sweden, published its findings.[1] The present data were obtained from this report, from conversations with Prof. Bror Rexed, executive secretary of this committee, and from information gathered during personal visits to each of the medical schools. There apparently has been no recent presentation in English of the status of the particular subject of anatomy in the land which gave the world such famous anatomists as Rudbeck, Sandstrom and the two Retziuses.

Organization

Teaching and research in anatomy, aside from kindred work done in veterinary schools and zoology departments, is restricted to the medical schools of the following four institutions: University of Lund, University of Uppsala, Karolinska Institute (associated with the University of Stockholm) and the University of Gothenberg.[2] There are no governmental posts nor private institutions which are devoted solely to anatomical research, although such institutes may be found in the closely allied fields of neurophysiology and cellular physiology (in Stockholm).*

"Anatomy," as used in an organ-

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*The term "institute," which in America usually connotes a purely research foundation, in Scandinavia has a wider meaning. To illustrate, the Karolinska Medical Institute (equivalent to an American medical school) has both a histological institute (a teaching department) and a neurophysiological institute (a laboratory for research alone).

izational sense, has a special meaning in Sweden, for in all the schools morphological studies are divided between the departments of "histology" and "anatomy," each headed by a professor and enjoying an equivalent status with, for example, pathology or pharmacology. This division is a deep-seated one, going back in the older schools to before the turn of the century. That such a division is as much an attempt to delineate the responsibilities of professorships as any natural division in subject matter is suggested by the fact that when a second professorship was created in general physiology at Stockholm, the field was divided into two departments with distinct administrations. There seems to be no desire to change this scheme of organization in the interest of greater administrative efficiency and teaching coordination, and even the recently established school at Gothenberg has separate "institutes" of anatomy and histology. However, the Committee on Medical Education, in recommending that coordination between the teaching of the two departments be strengthened (by meetings between the staffs), suggests that professorial titles read, for example, "professor of anatomy, specialty histology" instead of "professor of histology."

Each "institute" or department has a specified complement of personnel headed by a professor. As there are eight institutes of anatomy or histology in Scandinavia, there are just eight professorships to which subordinate ranks may aspire. These lower ranks consist of the "prosectorship," most nearly corresponding to the American associate professorship, and the "docentship," about equivalent to the successive ranks of instructor and assistant professor in the American schools.

Professors and prosectors have tenure, but the seven-year docentship is not renewable. Docents are not actually included in the departmental organization, but are appointed by the medical school as instructional needs dictate, though in practice one docent is usually assigned to each department. Lesser ranks of predoctorate level are those of the assistants and amanuenses.

As there is but one docent (and one prosector) to a department, it would appear at first glance that lower echelons are just sufficient to replenish the higher ranks, but actually, in most of the medical fields including histology, this system leads to an excess of docents, some of whom must re-enter clinical medicine. Gross anatomy in Sweden is a special case, however, in that over the last few years several positions with tenure have been vacant for considerable periods, a situation reminiscent on a small scale of our similar problem in America.

Docents, prosectors and professors must have both the degree of Medical Licentiate (our M.D.) and the Doctor of Medicine (similar to but not identical to our Ph.D.). Appointments and advancements to all ranks are competitive, the research experiences of the aspirants being weighed by an advisory committee which is selected by the educational ministry from among professors in the same general field of interest, occasionally even from other countries. Furthermore, the candidate must demonstrate his ability to teach by giving a lecture and a demonstration before the faculty and students of the university where he is seeking a position. The advice of this faculty and of the committee reviewing the research is then given to the minister of education, who makes the actual appointment in the name of the king. In the event that the faculty and the

research committee differ in their recommendations, the ministry has the responsibility of deciding which recommendation will be followed. Thus it may be seen that the Swede who aspires to a chair in anatomy must be well qualified; he must have the equivalent of both the M.D. and Ph.D. degrees, have a strong record in research and have demonstrated his teaching abilities.*

Salaries, aside from small adjustments for the local cost of living, are uniform throughout Sweden for each of the ranks. A professor receives about 30,000 Sw. kronor per year, corresponding at the official exchange rate to $6,000, or on a more realistic cost-of-living basis to perhaps $10,000 to $12,000. By comparison, a docent earns 19,000 kr., a departmental secretary 10,000 kr., and a carpenter 10,000 to 13,000 kr. There are no privately endowed chairs in anatomy in Sweden. (The several found in other fields of medicine pay the same salary as ordinary professorships.)

Teaching

The regulatory influence of the government on the teaching of medicine in the Swedish schools seems to be slight. At present, the only intermural regulations dealing with the curricula are some provisions contained in a 1907 statute governing the awarding of the medical degree. These requirements are very general in tone, merely stating, for example, that each student should have "a knowledge and practical exercises in histology." Nevertheless, the curricula of the schools are similar in that the preclinical (and also clinical) subjects are scheduled strictly according to the "block system," the beginning two years of the seven- to eight-year medical course being basic science years of which the first is devoted to morphological studies.

Teaching practices within the morphological year vary widely. All four schools present gross and comparative anatomy, histology and neuroanatomy. Additional courses also may be given; e.g., "anatomy of motion" at Stockholm, and "optics" at Gothenberg. In two schools histology is concentrated into the second semester, while at the others it is spread over the whole year. At Stockholm lectures are a favored method of presenting gross anatomy, some 146 hours being given, whereas at Lund there are only 100 lecture hours. In some cases the professor is active in the laboratory or dissection room, in others his chief contact with students is through lectures.

Some idea of the time allotted to the courses of the morphological year may be gained from the numbers of hours devoted to lectures in each course. On an average, 130 lecture hours were given in gross anatomy, 100 in histology, 25 in comparative anatomy, 20 in embryology and about 10 in histological technique. And to further develop this picture, it may be added that in gross anatomy, for example, some 70 additional hours were employed in demonstrations and 250 hours in dissection by the students. In regard to the inclusion of comparative anatomy and embryology in the schedule of the medical school, it should be explained that the Swedish matriculant of about 19 years of age enters medical school directly from the gymnasium, where he has had general biology courses, but no extensive work in embryology or comparative anatomy.* The Com-

*He need have no formal training in pedagogy, such as is required in some non-medical scientific fields in Sweden.

*Entry into medical school depends largely upon his performance in the "student exam," a comprehensive examination given annually throughout Sweden which the student must pass in order to graduate from the real gymnasium.

mittee on Medical Education has recommended that comparative anatomy, which now occupies two to four weeks at the beginning of the first year, be given either concurrently with the other anatomical subjects or at the end of the year on the grounds that an understanding based upon comparative anatomy is better grasped after some preliminary anatomical training.

No course in surgical or applied anatomy is offered in the later years of the Swedish curriculum. This absence has been explained as a practical result of the fact that in Sweden those practitioners and specialists who treat patients in their homes or at the doctor's office are not allowed to follow and treat these patients once they have entered a hospital, this function being taken over by specialists who work only within the hospital.* Consequently, since the average practitioner does only office surgery, it is considered unnecessary for him to retain many of the details of surgical anatomy.

Textbooks used in Swedish anatomy courses are chosen almost in disregard of linguistic considerations, the several older Swedish texts having fallen into disuse because of the impracticability of keeping them up to date solely for the 300 students who take anatomy each year. Since Sweden adheres to the Jena revision of anatomical nomenclature, which is generally not employed by writers of English, the textbooks used in gross anatomy are German. In histology and neuroanatomy, however, English-language texts are used, Maximov and Bloom's "Textbook of Histology," for example, being favored. One cannot help but admire the liberal training the Swedish freshman must have to enable him to read his gross anatomy in German, his histology in English and his quizzes in Swedish!

One activity in which a paternalistic government might be expected to benefit the teaching of anatomy is in the business of cadaver procurement. There is, however, no central agency for the distribution of this material and the schools contract individually with the state hospitals and homes for unclaimed bodies. With the increase in the general level of social welfare, this source of supply is becoming increasingly precarious, and at least three of the schools are having difficulty maintaining a four-to-one student-to-cadaver ratio. In Stockholm, the shortage has caused some shift of emphasis from student dissection to group demonstration.

Research

In contrast to the teaching and administration, which are almost entirely supported by direct funds voted yearly by the Swedish Parliament, research in Swedish medical schools receives financial support through several distinct channels.[3] One means is through funds paid by the state or by certain private endowments directly to the specific medical school to be used by the faculty for research purposes as it chooses. These funds for the four schools amount to about 1,500,000 Sw. kr. ($300,000) each year. An approximately equal amount is given annually by the state to the medical research council for distribution. This board of 16 members, 12 of whom are chosen by the medical, dental and veterinary schools, and four of whom represent governmental agencies, has full power to award the monies

*This division of labor is one going deep into Swedish medical history and is in no way resultant from the socialistic movement in Sweden.

placed at its disposal to individual applicants for use in buying equipment, paying travel expenses, hiring technical help or paying scientists' salaries. In addition to these major sources of revenue, there are several private foundations such as the Wallenberg Fund and Wenner-Gren Foundation, and international organizations like the Rockefeller Foundation, which support individual researchers. Lastly, there is an increasing number of public-sponsored funds for the furtherance of research on special diseases like tuberculosis and poliomyelitis.

Such a wide basis of financial support, coupled with the fact that there are few governmental restrictions such as stringent antivivisection laws, has ensured to Swedish medical research an unhampered development and great breadth of viewpoint. Basic research is as much encouraged as more directly practical investigation. In anatomy, to give a specific example, there are men who do work in such basic subjects as nuclear biochemistry and the metabolism of ocular media, as well as others who are interested in arthritis or tooth decay.

Freedom from narrow nationalistic influences, such as have been seen in some state-supported sciences, is evidenced by the cosmopolitan character of scientific articles written by Swedes. In one partial listing of papers published by Swedish anatomists in the postwar years, 73 papers are in English, 20 in German and one in French. Only occasional clinical papers directed to the practicing physician or having local interest; e. g., in physical anthropology, are written in Swedish. This increasing tendency of the Swedish scientist in medical fields to use English as a language for publication is reflected even more strongly in the distribution of languages found in the supplements to the various Acta journals written by Swedish authors over the years 1946 to 1952.[3] Of 190 of these articles, most of which represent doctoral theses, three were in French, one was in German and all the others were in English.

Also illustrating this broad outlook of the Swedish anatomist is the international character of the journals in which he publishes. Of the previously mentioned articles by anatomists, 50 per cent appeared in the various Acta journals, which are in general heavily supported by Scandinavian contributors, 30 per cent were in other international journals, and only an approximate 20 per cent were published in the monograph series of Swedish universities.

The international viewpoint of medical science in Sweden is also shown in the encouragement given to those who wish to study abroad, aid being available from several university-sponsored travelling fellowships, the medical research council and from domestic and foreign foundations like the Swedish-American and Rockefeller Foundations respectively.

Discussion

The present status of anatomy in Sweden has been outlined, and attempts made to trace the influences of the Swedish government upon this profession. It was seen that Swedish anatomy as a whole looms important and healthy. Anatomists are well qualified in that they have both research and medical degrees and must prove their teaching ability. As a teaching subject, anatomy receives ample emphasis, one year of medical schooling being exclusively devoted to morphological studies. Research,

apparently fairly well supported financially, is active at each of the eight departments. Administratively, thanks to the separation of gross anatomy and histology, anatomy carries as much or more weight than other preclinical subjects.

In the activities of teaching, research and administration, the influences from the Swedish government are patently intrusive only in the administrative sphere. Here, for example, general operating funds are allotted by vote of the national parliament, salaries are fixed on a national scale and appointments are made by the ministry, though almost always in accord with the recommendations of the medical faculty. The teaching of anatomy seems entirely free from official suggestion, nor is research activity prejudiced either in subject matter or results, despite the fact that the state contributes most of the financial support. Safeguards against this type of influence are found in the provisions allowing for the major portion of these funds to be dispersed under the control of the individual schools or by a quasi-governmental board of medical scientists. The absence of narrow nationalism is seen in the use of foreign languages in teaching and research publications, in the wide use of non-Scandinavian journals, and in the encouragement given to the exchange of foreign students. However, this cosmopolitan outlook has its limits, teachers of non-Swedish origin (except the "Swedish-Finns"), for example, being rare in the medical faculties.

Thus, it may be seen that while medical education in Sweden has accepted wide and vital ties with the state, research, teaching and to a large extent administration have maintained their independence, at least as concerns the basic science subject of anatomy. Future danger to the vigor of medical education in that country would seem not to lie in increasing imposition of the government upon medical education, but rather in the more subtle danger that could arise from the benevolent attempts by which academic medicine—with governmental blessings—is trying to raise its own standards. The almost compulsory suggestions of such semi-official bodies as the Committee on Medical Education may possibly lead to unprogressive standardization with discouragement of individual initiative and experimentation in educational matters.

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The Use of Home Visits in Teaching Psychological Attitudes to Medical Students

THAIS M. FISHER and IAN STEVENSON

EXPERIENCE IN teaching psychiatry to medical students has shown the wisdom of setting modest goals for their understanding of the subject at the time of graduation. We are far from wishing to make the medical student into a psychiatrist, and almost as far from any desire that he should be well versed in the many controversial theories and doctrines with which the field is so well furnished. Rather, we are content if the student, upon graduation, has understood some of the elementary principles of psychiatry. We are more satisfied if he has a personal conviction about those few principles than if he can quote freely the works of Freud and Meyer.

We emphasize the element of "personal conviction" because of what seems to us an important and often overlooked difference between the way in which a student learns the subject of psychiatry and the way in which he learns the other material of the medical curriculum.[1] All knowledge becomes more firmly possessed when its application has been personally experienced. In studying internal medicine, the medical student's sensitivities are no doubt enhanced, as Plato said centuries ago, if he has himself been ill and lived the role of patient. But he can dispense with this aid and still manage well enough in internal medicine. On the other hand, the student cannot achieve psychological understanding in any degree without some personal awareness of his own psychological processes. Useful understanding of other people's emotions and thoughts can only come through understanding his own. The medical student makes no progress in understanding the psychological disturbances of his patients until he can see similarities between himself and his patients.

Many obstacles obstruct his perception of these similarities. Some of these derive from the circumstances of the student's first exposure to psychiatric patients. In our curriculum the medical student first has personal contact with psychiatric patients in the junior year, when he is assigned for a six-week block to work on the psychiatric inpatient service. Here his patients are nearly all of the severely disturbed group; that is, psychotic.

Some advantages derive from

Mrs. Fisher is program supervisor, social service department, the clinical center, National Institutes of Health, Public Health Service; Dr. Stevenson is associate professor of neuropsychiatry and medicine, Louisiana State University School of Medicine. Henry O. Colomb, clinical professor of psychiatry and former head of the department of psychiatry at Louisiana initiated the program described in this article. The authors wish to thank other members of the department who participated in the program, particularly Robert A. Matthews, professor of psychiatry and head of the department.

having the medical student study psychotic patients first. The psychopathology is glaringly evident and the student has little trouble in learning to detect the major symptoms and signs of mental disorder. But important disadvantages exist also. The patients' thoughts and behavior are superficially quite different from those to which the student is accustomed. The patients appear so manifestly "abnormal" that the student has difficulty in identifying with them simply on the basis of the great difference in behavior. The differences between the patients and himself are much more apparent than the similarities.

Moreover, the effort to identify with the patient is fraught with anxiety. The student has usually evolved, by the time he reaches medical school, fairly satisfactory adaptive techniques for handling his own feelings and impulses. The adaptive processes of the psychotic patients have clearly failed them. Alien impulses have broken through into awareness and behavior. The attempt to identify with the patient, therefore, may arouse the student's anxiety about the dangerousness of his own impulses. It may bring to his imagination the possibility that he too could find himself in the predicament of these distressed people. Under the circumstances, the average medical student finds it more comfortable to believe in a world divided sharply into a group of persons with mental disorders and a group of healthy persons to which he assigns himself.

Our teaching efforts aim at helping the student break through the artificial barrier which he tends to erect between the normal and the abnormal. We do not ask him to undergo any conversion experience or to confess to "original neurosis." Instead, we try to provide him with experiences which will permit him to see and accept the fact of a continuum between the normal and the abnormal in psychology.

The student who grasps this central dogma of our teaching has a tool for learning further about mental disorder. First, when he can put himself in the place of his patients, he can approach them with the respect and consideration he would wish for himself in their position. Thereby he wins their confidence and can learn from them. Secondly, when he recognizes the similarities between himself and his psychiatric patients, he can apply whatever knowledge he has of himself to the better understanding of his patients. And thirdly, the student can reach a genuinely dynamic view of mental disorder. He no longer sees a psychiatric patient as the victim of a strange disease which just happens to him. Rather he sees mental disorder as the outcome of the interplay of environmental forces and the susceptibilities of the patient. The forces and susceptibilities involved differ only in degree from those which everyone experiences.

There are many ways of assisting medical students to such an understanding of mental illness. We have sought to help the student bridge the gap between himself and the psychotic patient by having the student visit in the home and study the patient's family. The members of the family are usually less disturbed than the patient admitted to the hospital. They are sufficiently similar to the student so that he can identify with them. On the other hand, the more the student studies the family, the more he learns that they are not much different from the patient. These facts gradually impinge upon

the student, although often with considerable emotional turbulence and struggle on his part. By methods to be described below, the student is directed and at the same time supported in the experience with the patient's family which gives him this insight.

General Program Plan

The program of home visiting was under the immediate direction of a psychiatric social worker who held a full-time appointment as assistant professor of psychiatry in the department. This program occupied approximately half of her time. The actual home visit was preceded by some measures of preparation. These consisted of a discussion between the social worker and the entire group of 16 students, and individual conferences between the social worker and each student. One home visit was then made by each student with the social worker. At the end of the visit they discussed it informally together. Then the student prepared a report of the visit which he discussed with the social worker. Finally, he discussed the entire case, including the data of the home visit, with one of the staff psychiatrists. This article is based on experiences with approximately 400 home visits made by medical students in this program. Although this program continues, we are reporting our experiences for the first four years of its operation.

Other medical schools have programs which include home visits, such as the plans for "family health advisors"[2, 3, 4, 5] and domiciliary care programs.[6] In most of these programs, however, the student visits the homes of patients alone. In one program the student is accompanied by a medical social worker in visits to the homes of medical patients.[7] We believe this to be the first report of a program in which the medical student, accompanied by a psychiatric social worker, visits the families of psychotic patients.

Student Preparation for the Visit

Prior to any student visit there was a general group discussion of the visits, led by the psychiatric social worker. There were usually 16 students in each group. The content of this discussion usually included: (1) the purpose and plan of the visit, (2) the family's feelings about the visit, (3) the student's feelings about the visit, (4) interviewing skills, and (5) behavior patterns of family members that frequently occurred.

The student was told that through the medium of the home visit he could learn more about his patient as a person and as a member of a family. He could see and study the patient's environment, its conduciveness to mental and physical health, the personalities of the family members, and the effect of these personalities on the patient. The student was to meet as many members of the patient's family as were available and to engage them in conversation either about themselves or about the patient. He was to learn as much as he could about the emotional and physical health of the total family. The student was usually pleased to know that he could use the home visit as an opportunity to gather historical information about the illness. He preferred this more familiar approach of asking specific questions to nonstructured interview. Since freer interviews often seemed to produce anxiety, further specific questions were suggested as aids to eliciting desired information about family attitudes and feelings as well as about the physical environment.

The student was encouraged to talk in his group about his own feelings toward the proposed visit. He was usually able to express his doubt about knowing how to proceed in this unfamiliar situation. In the hospital the student was the "host," and his security was enhanced by the setting and by his laboratory dress and professional equipment. In the patient's home the student was a "guest" without his white coat, his medical chart and with little use for his stethoscope. Without these outward aides to his professionalism, how would the student behave? Could he answer all the questions which family members might pose? What would he do if family members became anxious during the interview, began to cry or got angry? What would the student do if the family refused to respond and there were long periods of silence?

These questions were most often answered by the group itself with some direction from the social worker who, as the discussion developed, moved away from being instructor and became a kind of group leader. The social worker recognized the student's anxiety in going into a new situation, offered reassurance and promised her help and support during the visit. Group discussion of these feelings was seen to have great value. Among other advantages, the students learned that their colleagues were equally concerned and that such concern was natural.

The family's feelings of anxiety about the student doctor's visit also were discussed. The student was able to acknowledge that the family might feel disturbed by the visit. He recognized that the members of the family might feel guilty about their poor handling of the patient, might be concerned about the patient's progress or anxious about their own mental health. On the other hand, the student also recognized that the family would be relieved to find the student doctor an understanding, friendly person who came to offer help.

Such discussion usually led into an attempt by the student to clarify the manner in which he should present himself to the family. Could he ethically present himself as a practicing physician? The group most often agreed that the student could be introduced as a "doctor" (as regularly occurred in clinical practice within the hospital). If the family raised questions, however, it was agreed that the student should state honestly that his status was that of a student doctor. Once the student was somewhat relieved of his anxiety about the visit, he agreed that it would be important to show "good bedside manners" and present himself as a friendly, interested, helpful, professional person, with accepting, nonjudgmental attitudes. He concluded that such a person, if relaxed himself and if not overly identified with the patient, could offer family members an opportunity to talk, to express their feelings and, incidentally, to volunteer pertinent information. It was recognized that such a visit could be therapeutic for the family. Some students doubted this value, prior to the visit, primarily because no tangible service like a physical examination or a prescription for medication was offered. These students had to experience the visit to realize this value.

Some practical details of the visits also were talked over in the group sessions. For example, the group discussed arrangements for the visits, the responsibility of the student to dress and behave appropriately to his profession and the recording of the

visit for the permanent medical record.

Each student was asked to choose a psychiatric patient whose family he wished to visit. He was asked to inform the patient of his wish to visit and to obtain the patient's permission. Arrangements for the visit then were made with the family by the student and/or the social worker.

The discussions in the classroom were followed and supplemented by individual conferences between the social worker and each student. These conferences were arranged when a student had chosen the patient whose home he would visit, and preceded the actual visit. The student was encouraged to talk further about what he hoped to achieve in his particular visit, how he would accomplish this, what interviewing techniques he might find valuable, where he might need the social worker's help and what problems he anticipated. Wherever his feelings about the visit seemed to be interfering, these were explored, but only as they related to his ability to make the visit. In group and individual conferences the students frequently revealed misconceptions about the purpose of the visit. A common distortion was the belief that because a social worker was participating, the visit would necessarily be related to matters of "social welfare" or even "socialism."

Whenever students were able to express their resistances to the visit, it was possible to help them understand these. Active resistance was expressed and discussed. The student's arguments were accepted for their worth with understanding of why the students felt angry or resentful. Any misunderstandings were clarified. Usually the opportunity for the student to be heard, to ventilate his gripes and to be understood and sometimes reassured was all that was needed. Some students offered passive or silent resistance. These students would be either quietly conforming or verbally accepting and yet never fully participate in the experience.

Resistance to the home visit was often seen to be an outcropping of a general antagonism and defensiveness towards psychiatry. When the social worker listened to the student's objections about the visit, she often took the first step in helping him accept psychiatry instead of fighting it. This type of handling also gave the student a personal experience in the value of having one's feelings expressed, accepted and understood. Many students who would have been too emotionally involved to conduct an interview in the home without this help were enabled to do so. The following examples briefly illustrate the handling of resistances and the increased acceptance of psychiatry which the students achieved:

• One of the first students to make a home visit was quite angry about being asked to do so. The need for the visit was obvious for there were many known problems in the family. The student at first refused to accept this need. He began verbal attacks on the social worker for "deliberately selecting him to do her work." When given a chance to discuss this at length, he retaliated by asking why he was receiving so much personal attention. Further suspicion of the social worker's motives as well as those of the entire department followed. It was recognized with the medical student that he was one of the first students to be asked to make a visit, that students were selected in alphabetical order and that his name was near the beginning of the alphabet. It was further recognized that he would have more reason to

question this method of teaching and this amount of personal attention since he had not yet had the opportunity to know that each student, in the future, would have such a learning experience. He was invited to help in the evaluation of the home visiting program after he had made his visit. Further objections were raised by the student with a continuation of expression of angry feelings. Each objection was accepted and the situation clarified when possible. The student felt increasingly less angry. Finally, when his anxiety was recognized about going into a new and unfamiliar situation, he was noticeably relieved. He was promised help whenever necessary and finally was able to talk about what he might do on the visit. He ended a lengthy conference with the social worker in a jovial mood. On the visit he experienced a brief period of "stage fright." He was helped over this and then conducted his interview in a very sensitive, capable manner. Following the interview, he offered some constructive suggestions as to this method of teaching and "promised to let the other students know that it wasn't too bad." He was teased a little by the other students for his "change of heart about psychiatry," but responded good-naturedly.

•Another student began his individual conference with the social worker by stating vehemently that he did not wish to make a home visit and saw no value in it. He criticized the social worker and the department for the program. Discussion revealed that he had been unable to sleep because of anxiety about the visit. When this was explored with him, he revealed feelings of rage at the patient's father. His own father, like the patient's, had been an alcoholic and had not provided for him. The student had rejected the psychiatric interpretation that his father was an ill person and felt that his father was "just no good." After continued discussion of his own feelings about his father and about the patient's father, the student decided that he would try to make the visit. A generous amount of help was offered him during the visit. The student came away from the visit with an awareness of the many difficulties which the patient's father had suffered and with a much better understanding of why this father often resorted to alcohol. The student also seemed much more sensitive to his own father's problem, stating, as he reflected on the visit, that his father probably had experienced a "rough time" too. Shortly thereafter the student discussed his problems with the psychiatrist and arranged to receive some professional help for himself.

Procedure During Home Visit

Since interviewing is only learned by doing it, the student was given the responsibility of starting and conducting the interview, and was assisted by the social worker only when he needed help. Such responsibility also helped the student recognize the home visit as an appropriate medical function. The patient's family usually looked to the student as the authority and he was encouraged to take the lead. When social problems were encountered in the interview, these were turned over by the student to the social worker for handling. Many students were able to put the family at ease quickly, to give the members reassurance and support, to answer their questions, and even to explore further with family members subtle areas of feeling. Many students were astonished to find they could gather much background historical informa-

tion when they themselves relaxed and gave the family an opportunity to talk. Conversely, others who were less relaxed were amazed at how little they learned even though they asked numerous questions.

The student usually felt comfortable in raising questions about physical health, since these were familiar to him. Usually he was proficient in observing the physical surroundings as the interview progressed and in raising questions about the environment. Some students were anxious at the start of the interview and suffered a period of "stage fright." When this occurred, the social worker helped to get the interview started. Other students used the questions prepared previously and the suggestions given them by the social worker, and were comfortable as long as they were able to keep the conversation going by this means. Their anxiety mounted when there were brief periods of silence, and frequently they looked to the social worker to take over, at least temporarily. Still others remained comfortable as long as they were in control of the interview, but became tense when family members began to raise questions. An outpouring of feelings by the family members was sometimes disturbing to the medical student. He often found it difficult to handle such feelings and sometimes attempted to ignore them.

A striking example was that of a medical student who ignored the sniffles of the mother of a young schizophrenic patient. The student continued with his interrogatory methods, and the mother began to cry more loudly. As he continued to disregard her feelings, her crying increased.

The interview usually lasted about one hour or long enough for the student to feel that he had accomplished his goal. Whenever advisable, the family was given some factual information about the patient's hospitalization and progress. The interview was terminated at an appropriate point—usually when both student and family felt comfortable about the outcome of the interview. Some students had difficulty in being able to terminate, especially when the family was under considerable tension and pressure to speak. Most interviews ended with apparent satisfaction on the part of the family.

Whenever the family indicated an interest in continuing this relationship, some provision was made. A few students wished to see the family members on a continuing basis at the hospital. Frequently the members of the family were referred to the social service department of the university hospital for such help.

Discussion of the Home Visit

Following the home visit, the student and the social worker discussed the home, the interview and the student's feelings about both. The student was usually most interested in any problem of physical illness he encountered on the visit and concerned with helping the family receive appropriate treatment. He referred these for decision to the psychiatrist who supervised his work with the patient. The student was usually keen in his observations of physical environment and interested in the sociological and cultural factors manifested in the community, the neighborhood and the patient's home. He usually understood the importance of environmental factors in contributing to the illness. He could easily understand that a drab, unattractive, grim, crowded home reflected itself in the family personality.

The student was usually sensitive to physical and financial deprivation and sometimes troubled by it. His discussion with the social worker, following the home visit, focused rather quickly on ways of helping the patient and his family. He was often impatient with the community's lack of resources and eager to learn the methods of social betterment. This sometimes meant a complete reversal from the attitudes towards "social welfare" mentioned earlier. After the visit many students were able to recognize their own responsibilities to the community as citizens and as members of a helping profession.

Discussion of the content of the interview usually followed discussion of environmental factors. Background information elicited during the interview was reassembled in discussion with the social worker, and put together as pieces in a jigsaw puzzle to help understand the picture of the patient's illness. A better understanding of the dynamics of the illness was begun in this discussion and continued in the student's later discussion with the psychiatrist.

The examination with the social worker of the significance of the psychological and social material obtained in the interview was frequently received with much enthusiasm by the medical student. He usually experienced satisfaction with his own increased ability to interpret, beyond its superficial meanings, behavior manifested by the family on the home visit. He became more comfortable in examining and interpreting other psychological data. The visit increased his awareness of the need to individualize family members and to respect their part in management of the patient. The informality of these discussions with the social worker, frequently conducted over a cup of coffee, helped the student reflect in a relaxed way about his interview with the family.

As is helpful in any teaching and in any relationship, the social worker emphasized first the positive aspects of the student's performance. Specific examples of how the student related well to the family, or was particularly helpful to family members, were given. Favorable changes in family feelings and behavior as a result of the student's role were also cited. Many students stated that previously they had not been much aware of the significance of the doctor-patient-family relationship. They saw for the first time how much the doctor can affect the family. This increased awareness of the student's own personality as a therapeutic tool gave him added respect for himself in the field of human relationships.

An Emotional Experience

Few students, if any, had this experience without some emotional reaction. When the initial effect seemed unfavorable in that excessive anxiety or antagonism was aroused, every effort was made to modify this so that the students would profit by their experiences. Nearly always the final effect was favorable to the students' understanding of psychological relationships. Frequently the students came away from the home with an unbalanced identification either with the patient or his family. This would be expressed in such remarks as, "You can see what a time they must have with him (the patient)," or, "After talking to that family it's not hard to see how he (the patient) got sick." The social worker and the psychiatric staff attempted to modify such extreme identifications as these, and led the students towards a bal-

anced view of the whole picture. However, even these extreme identifications were considered an advance over previous adynamic attitudes toward the patient's disorder.

The student's personal anxieties about the visit were also discussed with the social worker following the visit. The student was usually able to state honestly the apprehensions and misgivings he had felt prior to making the visit. He could confess his own anxieties and how these were allayed as the discussions and the interview progressed. The student often needed some initial encouragement from the social worker in stating how his own feelings were aroused by the family attitudes. With this encouragement he was usually able to continue in the discussion and to bring out that he had experienced anger, sympathy, concern, etc. toward the patient and family during the visit. The student was usually noticeably relieved to talk about the adverse effects on him of the family's behavior. He himself experienced emotionally the impact of such behavior on the patient and understood with greater clarity the patient's dilemma in attempting to deal with this. The patient's and family's feelings, as well as those of the doctor, were recognized as being extremely significant in the doctor-patient relationship.

The students' responses to the home visit were conditioned by the maturity of their own personalities. The mature students made good use of the experience and were able to point out both its disadvantages and its advantages. The response to the visit of the students with prominent emotional difficulties reflected their own problems. The following illustrations exemplify this:

•One student was generally unacceptable to his classmates because of his nonconforming dress and behavior. He bullied other students and was aggressive and argumentative with the staff. His academic performance was unpredictable. Other students talked about how he was dominated by his very possessive mother who still insisted on selecting his clothing. He responded to his contacts with the social worker as if she too were a dominating, possessive mother. He resented all of her attempts to help him and disagreed completely with her. He belittled the home visit and accused the social worker of labeling all homes as "schizophrenic!" He objected to looking at the personality problems of the schizophrenic patient's mother, stating that these were not abnormal or different from any mother, "including his own."

•Another student did not attend the group discussion of the home visits. He came late for his conference with the social worker and said, in a flippant manner, that he had no need to discuss the visit he was about to make. Attempts to learn more of his feelings and to help him with these were thwarted. He belittled the social worker and home visit and expressed further hostility by becoming flirtatious and aggressive. On the visit he was so tense and anxious that he was unable to sit down. He paced the floor of the family's home. Following the visit, when his behavior was partially discussed, he stated that he did feel uncomfortable away from the protected setting of the school, that he felt threatened when he could not display his intellectual knowledge which was definitely superior. He planned to become a research specialist rather than to have much personal contact with patients because he knew something of his own personality difficulties.

• Another student was much interested in making a home visit and in trying to be of help to the patient and family. Prior to the visit, he verbalized his acceptance of the patient's problem of homosexuality. In the beginning of the visit, however, he became upset and anxious as he learned more of the problem and then controlled the remainder of the interview by talking exclusively about himself and his family.

• A very sensitive student, much interested in helping his patient, also became anxious on the visit when he was confronted with the blatant problems within the family and the family's unwillingness to do anything about these. He withdrew gradually, finally left the home in the middle of the interview without giving any expanation. He later told the social worker that his own feelings were interfering to a point where he was too uncomfortable to remain.

The above examples fortunately were exceptional. They did indeed present difficulties for the family being interviewed, for the students themselves and for this method of teaching. By far the greater number of students, however, responded enthusiastically and were helpful to the families. Illustrations of considerate, relaxed, mature behavior on the part of the students, sometimes under trying conditions, can also be cited:

• On his home visit one medical student was confronted by an extremely belligerent father of a schizophrenic patient. This father refused to allow the student and social worker to enter his home and accused them of trying to hurt him. He had obviously been drinking although he was not drunk. The student accepted the father's feelings but stated his own position and his wish to help in a sincere, straightforward manner. After listening to a barrage of the father's hostility while still remaining outside the home, the student and social worker were then invited in. The father then broke down and cried and begged for help. The student was most reassuring and offered some constructive help which was accepted. Later, when the events of the visit were discussed with the student, he stated that he had experienced illness within his own family and he was especially aware of what illness means to a family.

• Another student witnessed in his home visit a pronounced argument among family members with threats of physical harm to each other. He had been careful not to take sides and had listened with interest and understanding to both parties. At the appropriate point he intervened in the argument, suggested calmly that the family was upset because each member was worried and concerned about the patient. He continued that it was not important to place blame, but that he wished to help the family see what it could work out. The interview ended with the members of the family feeling better about each other and trying to work together on their common problem.

If students wished to talk about themselves to the social worker, she always listened. A number of students utilized the professional services of the social worker as a result. These discussions about themselves covered such matters as summer employment, housing arrangements, nursery schools for their children and adoption facilities for members of their families and friends. Discussion of such topics often led to the personality problems of the students. Specific social work help was given with reality problems. The students' personality problems, when acute, were discussed by the

social worker with one of the psychiatrists who decided on ways of handling these.

Evaluation of the Program Technique

Other teachers have reported techniques for teaching psychological attitudes[1, 8, 9] and have described the value of home visits to aid the students in understanding the problems of their patients.[2, 3, 4, 5, 6, 7] In our program the major purpose of the home visits was not the gathering of data about the patients. Rather, it was to provide the students with an experience in personal relationships. They observed and participated in a relationship between the families and themselves. And they studied the relationship between the family and its psychotic member.

The interviewing in the hospital of relatives of psychiatric patients provides much less valuable information than can be obtained in a home visit. In the hospital the relatives are usually interviewed separately and always away from their natural habitat. In the home they are more natural and, hence, present a more typical appearance and behavior. Moreover, as several members of the family are usually present during the home visits, students can observe their interaction.

Home visits by medical students without a social worker provide less satisfactory opportunities for learning. In our experience, the average medical student needs the support of an experienced person when he undertakes to visit the home of a psychiatric patient and to interview the patient's family. Upon occasions when the social worker could not accompany the students, their resistance to going became higher. The social worker contributes also as a second observer of the family and as an observer of students' performances. She can demonstrate to them the significance of behavior which they had not understood. Often she can point out to them behavior which they had not even noticed. And she can guide them constructively in examining their own technique in handling the interview. Thus the presence of the social worker enables the students to make the visit and also enables them to profit much more from it than they would otherwise.

Our evaluation of this program continues at present. Certainly such a program is but one of a number of techniques which can be employed for the same purpose. As indicated already, a change in the attitude of the medical student did not always follow the home visit. The final profit to the students from the visits varied greatly according to the cooperation of the family and the personal factors in the students.

Results naturally were limited by the restrictions to one visit when further visits with a continuing relationship between the student and family certainly would have been more instructive. But this would have taken a great deal more of the staff's time. We would make an approximate estimate of the value of the program described as follows. Some few students were able through the experience of the home visit to achieve remarkable insight into both their patient's and their own difficulties. Some few others remained intransigently reluctant to see any dynamic interplay between the patient and his family. The majority, in between these extremes, showed some advance towards a more comprehensive understanding of mental disorder.

Summary

1. A program of visits to the homes of families of psychotic patients by

junior medical students is described. The students were prepared for the visit by a psychiatric social worker who accompanied each student on the visit. Afterwards the visit was discussed in conference between the student and social worker and between the student and a staff psychiatrist.

2. It was found that the home visits provided a favorable opportunity for the students to observe the interaction of the members of the patient's family with each other and to study family relationships with the patient. The social worker provided necessary support for the students during anxiety-producing experiences. At the same time her supplementary observations permitted the students to learn more than they could when making a visit alone.

3. The study of the interaction of students and family, and of family and psychotic patient, helped the students abandon notions of a sharp separation between "normal" and "abnormal" mental states. It assisted them towards a genuinely dynamic view of mental disorder. At the same time, they had a personal experience of the importance of the doctor-patient relationship.

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New England's Unique Postgraduate Medical Institute

CHARLOTTE W. TROUTWINE

THE MEDICAL postgraduate study problems that beset the nation did not bypass Massachusetts and New England. Perhaps because of Boston's status as a medical center, the degree of difficulty only seemed magnified here; perhaps, in fact, it was magnified.

The Massachusetts Medical Society faced the issue. Members of the society's Committee on Postgraduate Medical Education in 1951-52 conceived the idea of a Survey on Postgraduate Medical Education to unravel answers from the tangle: was it impression, rumor or fact that the medical schools, hospitals and medical groups in the area, although doing their best under harassing pressure, offered courses, conferences, clinics, etc. for postgraduate medical education but with random disregard of each other's programs, with much duplication of effort, with overlapping of schedules, with unintentional neglect of certain subjects, with a paucity of publicity, with inadequate attention to the actual wants and needs of the average practicing physician?

The survey was conducted by the writer on a $5,000 collaborative grant of the Harvard, Tufts and Boston university medical schools; Massachusetts Department of Public Health; Harvard University School of Public Health; Massachusetts Medical Society; Massachusetts Academy of General Practice; Lahey Clinic; Joslin Clinic; American Cancer Society, Inc. (Massachusetts division); Arthritis and Rheumatism Foundation (Massachusetts chapter); Massachusetts Heart Association, Inc.; Massachusetts Tuberculosis and Health League, Inc.; National Foundation for Infantile Paralysis, Inc., Boston Tuberculosis Association, Charles H. Hood Dairy Foundation.

Rather than itemize here the survey's findings and constructive proposals, the reader will find it significant to know that the work then started now continues, and that the temporary survey actually became, in 1952, the Postgraduate Medical Institute—a permanent, legally incorporated, nonprofit, educational organization.

In short, PMI became, and continues to be a clearing-house, a central agency, a single organized source for all information pertinent to postgraduate medical education in Massachusetts and New England.

Institute Projects

We offer the physician a list of regularly scheduled clinics, conferences, etc. in hospitals throughout New England; a list of annually scheduled postgraduate medical courses programmed by all medical schools and other organizations in the area; a brochure of each month's coming events (entitled *What Goes On*), sent free to 18,000 physicians and hospitals

Mrs. Troutwine is executive director of the Postgraduate Medical Institute, Boston. This article is adapted from an address presented during the 65th Annual Meeting of the Association of American Medical Colleges, October 1954.

in New England through an advertising contract arrangement with Lederle Laboratories Division of American Cyanamid Corporation. (Incidentally, we have the most complete list extant of practicing physicians in the New England area.)

The many lists kept by hospitals pertaining to their ward rounds, clinics, etc. have been indexed by subject by PMI for all of New England. When a local physician or, as often happens, a physician-visitor from a foreign land wishes such information, it is available through PMI in a matter of seconds.

We compiled and keep up to date a speakers list with confidential notations on each speaker's speaking and teaching ability. This list is also catalogued by subject to aid us in replying to requests of district medical societies and other organizations for speakers.

The loose ends of much valuable but heretofore scattered information have been tied together, are synthesized and kept current by PMI. But our function as an information bureau is passive compared to the active role that engaged us soon after our organization.

The survey had discovered that the free lecture series offered by the Massachusetts Medical Society for eight years was not interesting new men, that year after year the same familiar few registered. The series ended. Shortly afterwards the first course in general medicine was offered in Boston by PMI at an average cost of $1.50 per hour per subscribing physician (as opposed to a national average of $1.75) and opened to an enthusiastic total of 221 physicians! One-third were not members of the Massachusetts Medical Society and therefore, presumably, were graduates of the nonaccredited medical schools closed a few years previously in this state. We interpreted that portion of the enrollment to mean that the doctors most needing postgraduate medical training realized it themselves and would go after it if it were made available to them.

Today, in Massachusetts, PMI courses in general medicine are going forward in eight different areas, one of them a distance of 165 miles from Boston.

During the survey year, PMI also had begun a teaching experiment in Gardner, Mass., 65 miles from Boston. A Boston speaker went there once a month to staff meetings; live patients were used in the beginning; doctors from surrounding communities were invited.

As a heartening consequence of both the Gardner and Boston programs, other local areas besieged us with requests for courses. We listened, then adopted the effective procedure used today. Any request, we said, should be made by a representative local committee in cooperation with the district medical society. An area chairman should be appointed. The course, it should be understood, must be open to every physician; a minimum of 25 registrants must be guaranteed, and as many more as necessary for proportional representation. It also should be understood that all physicians in surrounding communities were to be invited; that announcements (posters, course programs and postal reminders) would be sent to all physicians and hospitals in the area. The local committee would decide the time, the day and place for the course; the course would rotate among local hospitals if more than one exists in the area or, should circumstances dictate, in a neutral meeting place.

This policy, readily accepted, goes a long way toward eliminating fac-

tional differences, or a tendency toward same, and confirms PMI's remaining neutral.

Courses, for the most part, are weekly (experience shows that once a month is too infrequent), but some communities meet every two weeks. Although courses in Boston average 25 sessions of two hours each, most area programs consist of 10-12 sessions of two hours each and one is of three hours' duration. Most areas seem to prefer Wednesday as meeting day, and afternoon as the time, but one area meets on Friday evening and other areas are experimenting.

All Postgraduate Medical Institute courses are credited by the American Academy of General Practice against the stipulated 150-hours-every-three-years postgraduate education requirement. Our greatest enrollment, therefore, is among general practitioners, but we find that the subjects presented capture specialists' interest as well.

Course Management

The institute manages the proposed local program in various ways. It enrolls subscribers, issues the tickets, keeps attendance records, deposits course-fee checks, pays the speakers, sends out announcement notices, issues course certificates, mimeographs and ships whatever written material is to be used, insures its distribution and hires a woman for the registration desk (her duties include readying such physical facilities as chairs, lights, etc.), and an operator for whatever machines will be used. In the first two years PMI hand-tailored every program, but during the past year has standardized programs into various subject combinations. This, we believe, will, in a period of four years, guarantee complete coverage of those subjects most in demand. But recently, when two areas chose not to accept our formula, we built a program around their specific requirements.

Each speaker is PMI-instructed in technique based on findings relative to effective teaching methods researched by PMI. (This research is continual. We have found, for example, that the panel-type course is superior to the didactic lecture; that, ideally, if impractical for all areas, bedside teaching would be most desirable.) The speaker is given samples of the type of mimeographed material PMI has ascertained that the audience likes, for the purpose of preparing his own short case-histories and other factual, practical information concerning diagnosis and prognosis; is advised that, if apropos, a live patient will be provided; is furnished with adequate travel information (highway route numbers and landmarks—maps when necessary) to make his trip as expeditious as possible; is sent a memo-reminder as the date of his course nears. (Locally, in Boston, the speaker receives $15 per hour meeting; $25 if travel involves less than 35 miles. On an average speakers receive $50 for out-of-town travel, but over 75 miles are allowed 8 cents per mile.)

At the beginning of every meeting PMI distributes a comment sheet and a question slip to each physician in the audience, requesting his anonymous appraisal of such matters as the meeting's value to him, its presentation and how, in his opinion, it could be improved. Is he satisfied? Was he bored? Why? About subject matter and content: too broad? too narrow? The comment sheets and questionnaires are collected at the end of the meeting, the information compiled and analyzed, and the speaker ap-

prised. Upon termination of the entire course, a questionnaire is mailed to all registrants, asking for their opinion of the course as a whole, and suggestions for next year. An analysis is forwarded to the speaker for next year's course.

PMI also compiles information concerning the registrants: home address (many are from surrounding states), how many repeaters, how many are members of the Massachusetts Medical Society, what proportion of active physicians in the immediate area attended.

In addition to the information bureau and course activities already described in part, the institute engages in a variety of related services. It keeps abreast of the means employed by other states for bettering postgraduate medical education, and tests which of these (TV, telephone-circuit, etc.) can be used in Massachusetts. It assists local hospitals and community groups in planning and improving their teaching programs. It aids district medical societies and others, not only in obtaining speakers but in planning and publicizing their programs. It has assisted a number of other states and many foreign countries, attracted by its organization, to adapt procedures suited to establishing comparable institutes there.

Financial Structure

Most correspondents are interested in the institute's financial structure. We are happy to be able to say that last year our courses in general medicine paid for themselves. But the services that PMI offers are wholly dependent upon other means and, unfortunately, must be curtailed accordingly. One-sixth of our income in 1954 was received from the Massachusetts Medical Society; the balance from such health organizations as those already listed as contributors to the original survey, and from various other sources including philanthropic and research foundations.

This annually-solicited assistance has been of value to surveys, but for solid building we must look to some kind of continuing support. For instance: as already mentioned, PMI's course program last year was self-supporting. But if we are to increase the number of area courses and to expand hospital bedside programs—which, certainly, must be done—a financial problem concerning subsidization will arise. This could be solved if local physicians and hospitals, medical schools and medical societies, etc.—those who benefit from such a program—would meet the entire cost. The comprehensive surveying that we have done on costs, including a complete breakdown of the cost of each course, tells us what expansion would involve.

Other pressing demands may no longer defer to time and patience. Our programs should become ancillary, truly regional and should be advertised beginning at the undergraduate and graduate medical school levels. We should engage in solid public relations endeavors to reassure a public, made health-conscious by medicine's voice through the years, that the voice was not recommending, "do as I say" without itself "doing." An alert, literate public demands that its doctors be skilled in the application of medical research's latest findings.

Finally, the Postgraduate Medical Institute is looking toward the day when a national clearing-house organization will be established to bring into focus each state's common aim: better postgraduate medical education with all that means for the health, which is the fundamental wealth of our nation.

An Experimental Course for Teachers of Physiology

JULIUS H. COMROE JR.

THE AMERICAN Physiological Society, at its fall meeting at Madison, Wis., experimented with a new program feature designed to assist teachers of physiology. This is a brief report on the background, objectives, execution, achievements and shortcomings of this feature.

Everyone agrees that it has become very difficult indeed for a teacher of physiology to acquire all of the knowledge and insight needed to present every aspect of this broad subject to students. A textbook is usually several years out of date at the time of its publication and, therefore, cannot help the teacher keep abreast of important new developments in physiology. A review article is of great value to the teacher if the specific subject has been reviewed in recent years, if the article has been written for the "general practitioner" of physiology rather than for the specialist, and if the article is more than an annotated bibliography. The current physiological literature (original investigative work) is usually written for the specialist and is perplexing to an expert in another field.

The problem of how to keep up to date was discussed at the AAMC's first Teaching Institute (physiology, biochemistry and pharmacology). There attention was called to the one- to two-day "refresher" courses which have been organized by many clinical groups (pediatricians, radiologists, ophthalmologists, etc.) in conjunction with their annual meetings; these courses, given by experts in a special field, have proved to be useful in giving busy clinicians a broad and accurate view of the whole specialty. It was suggested that teachers in the biological sciences (whose research is in a restricted field but whose knowledge must be broad for teaching purposes) might develop similar courses to assist each other.

The newly formed Committee on Educational Matters of the American Physiological Society organized and presented an experimental program of this type in order to determine, by audience reaction, whether such courses should become a regular part of future programs of the society. The field of pulmonary physiology was selected for the trial course, because textbooks and review articles have not been able to keep pace with the very rapid increase in knowledge in this subject. The course was arranged for the two days preceding the September meeting of

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the American Physiological Society. Classes were scheduled from 2 to 5 P.M. and 7 to 9:30 P.M. on the first day, and from 9 A.M. to 12 noon and 2:30 to 5:30 P.M. on the second. All teachers of physiology were invited to attend through the regular announcements of the fall meeting. There was no tuition or registration fee. The local committee at Madison arranged for meeting places in the University of Wisconsin dormitories and meals in the student cafeteria at very reasonable prices.

The faculty consisted of J. H. Comroe Jr., department of physiology, Graduate School of Medicine, University of Pennsylvania; Hermann Rahn and Wallace O. Fenn, department of physiology, University of Rochester; Ward S. Fowler, department of physiology, Mayo Clinic, and Jere Mead, department of physiology, Harvard School of Public Health. Emphasis was placed on presentation of important new physiological concepts not yet described in texts, and clarification of complex aspects which are essential to a thorough understanding of the subject. Whenever possible, mention was made of material which might be included in the student's laboratory experience.

The course was directed toward teachers whose primary interest was *not* in *pulmonary* physiology. In general a lecture period of one and one half to two hours was followed by a discussion period of one hour. The four main topics presented were (1) alveolar ventilation, (2) the relationship between alveolar ventilation and pulmonary capillary blood flow, (3) diffusion across the alveolar-capillary membranes, and (4) mechanics of breathing. Following the last presentation, Edward P. Radford Jr., of the Harvard School of Public Health, exhibited a 16-mm. teaching film in color on the mechanics of breathing; this film, prepared with the aid of a grant from the National Foundation for Infantile Paralysis, will be available to departments of physiology for teaching purposes.

The two-day course was attended by 170 "students;" among these were well known professors of physiology. Attendance at the last session of the second day equalled that at the opening lecture of the first day. Answers to a questionnaire indicated that every "student" thought the course was worthwhile; many offered constructive suggestions for future courses.

Among the shortcomings of the course were the following:

1. The conference groups were too large (85 "students" in each). This was unavoidable because of a decision to accept "students" enrolling at the last minute.

2. Not enough mimeographed and lithographed notes and illustrations were available; these had to be mailed to some of the "students" at a later date. This again was due to the unexpectedly large enrollment.

3. Some of the subject material was considered too advanced for transmission to students. However, the "faculty" believed that this could not be avoided since the teacher's background knowledge must go beyond that material actually presented to his students.

The council of the American Physiological Society voted to continue the new type of program for teachers next year and to defray all expenses incurred by the faculty in preparation for the course.

Medical College Catalogues Need Modernizing

AL BOECK JR.

MEDICAL COLLEGES, struggling with the problem of correcting many distorted impressions about their operation, are generally overlooking their best medium for presenting the facts about themselves — their catalogues.

These catalogues, when properly used, are ideal media for clearing up the haze of mystery which enshrouds the admissions program, for penetrating the film which envelops the curriculum and for lifting the curtain which blocks the view of the actual operation of the medical school.

It is no secret to admissions officers, premedical advisors and freshmen counselors that prospective and new medical students know little about the training program which they so desire to enter. It is not uncommon to find one of these students expecting to continue the pattern of his undergraduate college by electing a good share of his course of study. Some also expect to become specialists by electing more courses in a specific field, just as they did when they wanted to major in biology in college.

Advisors also find that a considerable number of counseling problems result from the student not becoming adjusted to the medical college situation. An easy orientation to the new situation is obtained from a discussion of the medical college with the prospective student. This can be done effectively through the catalogue.

The assumption so far has been that the student will take advantage of the catalogue to acquaint himself with the program of the professional school, and many persons will be quick to point out that practically no one *reads* the catalogue.

It is true that most college catalogues traditionally are reference works for registrars and faculty members. Historically the catalogue has not been intended as anything but a reference work, and it has been published in a drab, unpalatable form.

However, it is also true that in cases where the catalogue has been edited and designed for reading, the students and student advisors have read it and have benefited from it. One college in New York State, after completely revamping its catalogue to meet the needs of students and persons unfamiliar with the college, attributed much of the credit for an increase in applications to the new catalogue approach.

By now it should be evident that a definite point is being made here that the primary audience of the

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catalogue should be the student. This does not mean that it cannot continue to serve the registrar, the teacher, the counselor or any other person who seeks reference material. It does mean that first consideration should be given the prospective student as the book is put together.

Traditional Weaknesses

Perhaps the simplest way to point out the weaknesses of the traditional college catalogue is to pick almost any one at random and leaf through it.

The first thing that strikes the eye is a lengthy and minutely detailed table of contents. In most catalogues this is really not a table of contents at all but an index. But an index is also included, thus the table of contents duplicates the information and erects a reading barrier at the very beginning of the book.

Next comes the faculty roster, running as high as 30 pages in catalogues of the larger schools. The fact that this is generally the least used section of the book again fails to influence the designer.

Then comes a laborious description of the history of the school and an itemized list of the buildings. These are of interest to a candidate, but not of top interest.

Finally, then, comes what the student is most interested in: how does he get in and what does it cost.

The point here is that the student reader must shuffle through dozens of pages before he comes to what he considers the most important part of the catalogue, and in so shuffling and seeking he runs the risk of losing interest in the whole process. Why not plan the book to make it serviceable to him?

Organization is the key to serviceability in a catalogue. It seems logical to put the material in demand where it can be found easily and to have the copy arranged in some sort of progressive order.

A simple continuity might run like this: calendar, table of contents, orientation section, admissions, costs and financial aid, clinical facilities and buildings, course descriptions, faculty list and index.

To follow through on the improvement of the table of contents, the catalogue might well be broken into sections and the sections and their beginning pages listed in the contents. This serves two purposes: (1) it breaks the book into shorter sections, each dealing with a specific topic such as admissions, and (2) it greatly reduces the mass of information which generally goes into the table of contents. Such a table will refer the reader to sections relating to points of interest; the reader seeking a specific fact can use the index to locate it.

Such an approach makes the catalogue more attractive by giving it a booklike format and by breaking sections which run endlessly page after page. Some catalogues have only one section; that is, they start on page one and just go on until the last page without any break except for minor headings.

By breaking the catalogue into such sections, the editor has a chance to change his mood as he goes from one subject to another. For example, he can use an informal approach in presenting a discussion of the school and the way it is operated. This can be a conversational description, used to tell the reader that he must be prepared to accept a new pattern of education, that he will no longer pick and choose his subjects and that he will take his courses in concentrated form.

This is of great value to him because if he is like many new medical students, he isn't ready for the daily anatomy sessions which last seven or eight hours. It helps him shift over from the one hour on Monday, Wednesday and Friday class routine of undergraduate school.

By ending such a section and starting on a new one in chapter fashion, it is possible to deal with the next in a more formal way. Such sections as course descriptions, for instance, still must be designed to present data on title, number, hours of credit, time of meeting, instructor and brief outline of content. This is frequently done in a telegraphic fashion to present a maximum of information in the minimum space.

After these sections comes the faculty list, where it can be checked by those who are interested. As a means of cross reference, it is helpful to run some faculty data with the departmental course offerings. The entire biography need not be run with the courses, but enough to indicate who is in the department. Should the reader be interested in degrees, date of appointment or other information the school may decide to include about its faculty, this can be found in the complete list at the close of the catalogue.

At the very end of the catalogue is the index. Use of the index can be made more helpful if it is related closely with subheadings throughout the publication.

This approach to the medical college catalogue has been tried and found an improvement over the traditional outline. Its purpose is to make the publication more readable, more attractive, and easier to use. It has served to induce students to become better acquainted with the college before they register, and has not reduced the value of the book to those who use it solely as a reference work.

This is not the place to deal with such technical aspects of this publication as legible and attractive type, page layout and publication design. These are important points for the catalogue publisher, however, if he is to carry out fully the spirit of the revamping job.

This revamping is of special importance to the medical school where the catalogue is often the sole publication for students. Unlike teachers' colleges and liberal arts schools, the medical schools do not ordinarily publish special viewbooks and recruiting pieces. This means that the catalogue must include some of the elements of this particular type of publication.

In lieu of other publications then, the catalogue must inform the candidate that the school offers what he seeks in a professional college. This will be supplemented, of course, by interviews and visits to the campus.

Some colleges will undoubtedly want to go farther along this line than others, but it is inescapable that most medical colleges today are not effecting the maximum benefits from their catalogues and might well study their own to see what changes might be in order.

Salient Features of American Education in 1954

IN PLANNING A program for the future, this richly composed Educational Policies Commission has had to survey the salient features of the current educational situation in the United States. As further background for the program plans, you may be interested in the commission's analysis of this current scene.

The first matter which has impressed the commission is that the American people seem now to be in the early stages of a new and comprehensive reappraisal of the educational system that they have inherited. There is today perhaps more analytical scrutiny of educational ideals and policies, both by the profession and by the public, than we have had since the days of Horace Mann and Henry Barnard. This reappraisal sometimes takes the form of attacks on the schools. Irritating and unfair as some of these attacks are, the fact of their appearance and the surveys of reaction to them indicate primarily that people are interested in the subject of education, and that they have a lot of questions about educational issues on which they haven't made up their minds. These issues go very deep into the economy of the country and the cost of schools, into the relation of schools to other institutions, into the conservation of human talent, into the relations of public and private education and into the worries and insecurities of international relations. We may anticipate, in the years just ahead, a greatly increased concern about education— using the word concern in its Quaker sense—on the part of the electorate. These are years of reappraisal and of planning, years in which the American people will make decisions on education of long-range consequence. It is important that, in these public deliberations, the right questions be asked. It is too easy for the debate to skyrocket off on tangents or to welter in inconsequential trivialities. The role of the educator in this debate is to keep the debate focused on the basically important matters, to see that the right questions are asked, to call attention to traditional goals and values, and to make certain that the public is fully informed as it establishes its educational guidelines for the future.

A second factor which has impressed the commission is the extent to which interrelationships between education and other agencies are now cultivated. The relation of school to home and to church, to public health and other youth-serving agencies, to radio and television, to motion pictures, to military service, to agencies of adult education—even the relation between schools and the ubiquitous comic books—are in a stage of ferment. A new level of coordination among all the educational forces which shape the growth of "well-rounded personalities" seems to be in the making. This process is inevitably slow-moving, and involves a wide range of adjustments, but it holds great promise for education

This article is taken from PROCEEDINGS of the "Open Meeting" of the Educational Policies Commission at the 92nd Annual Meeting of the National Education Association of the United States, June 1954. It is part of remarks made by Howard E. Wilson on "What the Educational Policies Commission Plans for the Future."

and for schools. It involves closer study of the functions best allocated to each of the various social agencies, including schools; and it involves continual alertness on the part of educators to the general trends of social development. It involves more thoughtful integration of the various levels of education, particularly the relations of secondary and higher education, and of both these levels to the rapidly emerging agencies of adult education. One significant feature, then, of the current scene in American education, is the relation of schools to all the other educational influences and agencies of modern life. This is particularly important and particularly difficult in view of the rapidly moving character of American life today.

The commission has been somewhat concerned, too, with another feature of the current scene—a discernible rise in caution which sometimes approaches timidity, which stresses conformity rather than innovation. Political influences in the country today have sometimes dulled the pioneering, searching, creating spirit—even in education. No one desires the excesses of innovation which have sometimes plagued us, but we all desire a certain daring, a certain freedom, a certain flair of courageous individuality—and we desire the kind of atmosphere which nurtures these typically American traits. The commission has been mindful of this situation as it has formulated a program for these times.

All of these salient characteristics of education today are, of course, strikingly affected by two related developments—the financial problem of maintaining a society at our high level, and the terrific and complex pressures of the international situation. There are today not only demands on the taxpayer for dollars, but also more demands for a share of each dollar of public income than we have ever known before. There are basic questions in the minds of many people as to how much our society can afford to spend on education, and a rising insistence that every dollar spent be well spent. This financial sensitivity is amplified by the great costs of maintaining national security. Indeed, the uncertainties of the international situation affect not only our financial solvency but also our whole national psychology. Education has a responsibility in the international situation because it trains the manpower for peace and for war, and also because education itself is now an influence in international relations. Education is involved in national policy toward world issues; in the very degree that the cold war is a war of ideas, the forces of education are privy to that war.

There are, of course, many vexatious professional questions with which we as educators have to deal. There are problems of teacher recruitment, of curriculum making, of school administration, of the most effective use of modern teaching aids, of state-federal relations. These must be studied. Yet even these are influenced by social developments and trends and issues outside the schools. The commission hopes to study certain of these professional problems. But the commission is also aware that many of these problems cannot be dealt with effectively until issues of wider social policy have been clarified. It is to the study of education within American society and of current social influences as they impinge on education either for good or for evil, that the commission seeks to address itself in the years immediately ahead.

Editorials and Comments

Senate Bill 1323 — 84th Congress

FOR THOSE WHO BELIEVE that the federal government has a responsibility to contribute to medical education beyond the research and teaching grants it now contributes, S.1323 should prove a very acceptable bill and one worthy of vigorous support.

It would provide $50 million a year for the five years beginning July 1, 1955, to make grants for construction to assist in the establishment of new medical schools and in the improvement and expansion of teaching and research facilities of existing medical schools. For new schools and schools contemplating a 5 per cent increased freshman enrollment, the federal grant may cover two-thirds of the cost of construction. For other schools the federal grant would provide one-half of the cost of construction. The stipulation that no one medical school would receive more than $3 million in the five-year period should insure that the funds are widely distributed and that state and local agencies will be stimulated to continue to make their essential contributions to their medical schools.

While the distribution of these funds would be a charge of the Surgeon General of the Public Health Service, he would be guided by a federal Council on Medical Educational Facilities, which would consist of the Surgeon General serving as chairman and 12 members appointed by the Surgeon General with the approval of the Secretary of Health, Education and Welfare. Six of these members would be chosen from the general public and six from among "leading medical or scientific authorities who are skilled in the sciences related to health."

Two other provisions of the bill are well worth noting: (1) as much as 20 per cent of the amount of any grant for new construction may, if desired, be allocated to permanent endowment for the cost of maintenance of the new facility; (2) it is specifically stated that "nothing in this title shall be construed as authorizing any department, agency, officer or employee of the United States to exercise any control over, or prescribe any requirements with respect to, the curriculum or administration of any medical school, or the admission of applicants thereto."

Senate Bill 1323, as introduced by Sen. Lister Hill on March 4, 1955, would appear to be a carefully designed effort to provide medical education with much needed financial support for construction. It is designed to be of a one-time grant nature and to have a minimum of "strings" attached. Though the incentive to obtain two-thirds federal aid instead of one-half by increasing enrollment by 5 per cent has obvious dangers, medical school deans are well aware of those dangers. It is to be hoped that the bill in its present form will receive full and sympathetic con-

sideration by Congress and that it will escape the revisions and amendments which can so easily disturb the balance of a carefully planned bill and convert it from an acceptable bill to an unacceptable one.—D. F. S.

Sponsored Research Policy of Colleges and Universities

THERE ARE A NUMBER of facts about research in our colleges and universities that are fairly apparent to us all: governmental support, industrial support and foundation support for research in our colleges and universities is at an all time high; much of this sponsored research is to a specifically named end and purpose; so great is the preoccupation of our college and university staffs with this sponsored research in specified fields that there are institutions in which the undergraduate teaching program and basic research program do not receive the attention they require if they are to thrive; much of the sponsored research provides an unrealistic "overhead" to cover the indirect costs to the institution of providing the principal investigator, the space, the heat and light and other needed facilities.

It is, therefore, of considerable interest that a Committee on Institutional Research Policy, appointed by the American Council on Education, has reviewed this whole problem and summarized its findings and recommendations in a report "Sponsored Research Policy of Colleges and Universities."* This report enumerates the hazards of sponsored research as follows:

"(a) Such research may seem so attractive financially as dangerously to divert the scholars in our universities from research which extends the boundaries of knowledge and to bend their interest too much toward matters of immediacy, thus drying up the principal wellspring of fundamental knowledge.

"(b) The attractiveness of sponsored research may divert an improper amount of attention and interest from the academic program, thereby affecting the quality of our education.

"(c) Such research may emphasize certain fields of knowledge at the expense of others, with the result that important areas of scholarship and research may be neglected simply because funds are available more readily in those fields in which sponsors are interested—a danger which becomes more serious when institutions use a substantial part of their own unrestricted funds in the sharing of the direct or indirect costs of sponsored project research.

"(d) The control and accounting procedures required by the government may subtly change the character of educational institutions, thereby reducing the value of their special type of environment for creative work, which includes independence of the investigator, relative simplicity in management, and sympathetic understanding between administrative and academic personnel.

"(e) Cancellation of contracts may leave the institution with long-term commitments to the graduate student program, to the staff, and for facilities, that may be financially embarrassing or disastrous."

*Committee on Institutional Research Policy: "Sponsored Research Policy of Colleges and Universities." American Council on Education, Washington, D. C. 1954.

Having pointed out that while sponsored research in agriculture and agricultural engineering has been predominantly of the institutional, non-project type, sponsored research in medicine and engineering has been overwhelmingly on a specific project basis, this committee makes the following recommendations to colleges and universities:

"1. No educational institution should seek or accept funds for emergency research or development unless it has special advantages of men, experience, and facilities which make it clear that the institution can undertake the work better than some other agency. Even under these conditions, the institution might appropriately refuse the work unless it should become compellingly clear that it has a responsibility to help the government meet an emergency objective.

"2. Except for emergency projects, sponsored research should be closely related to the normal program and recognized objectives of the institution. It should involve only work which can be carried out with enthusiasm by the staff, and it specifically should not be work which the staff would undertake with reluctance and which would be unrelated to their educational and professional programs. A member of a faculty should never be assigned to contract research against his will. Normally, no project should be accepted unless it is open to qualified students.

"3. Imposition of restrictions on publication of research results, either for secrecy or patent reasons, is incompatible with the basic concept of an educational institution as a source and distributor of knowledge and is difficult to reconcile with the other basic aims of such an institution. Such restrictions, especially long-term or permanent restrictions, should be undertaken only for exceptional or emergency reasons; otherwise, no arrangement should be permitted which could inhibit free and effective scholarship, freely disseminated.

"4. The college or university should maintain a proper balance between the sponsored research it undertakes with short-term financing and its normal program, in order to avoid the hazards enumerated above. No institution should permit itself to become so dependent upon sponsored research that the cancellation of this research would seriously damage it.

"5. The educational institution should carefully determine the entire cost to it of sponsored research, and if it accepts contracts or grants that do not cover both direct and indirect costs, the institution should do so with the full recognition that it is itself making a contribution to the cost of the work. The committee believes that this is a part of a larger problem facing our colleges and universities, involving the acceptance of grants-in-aid from those foundations and other sources which at present do not pay the full cost of the projects they support. The committee recognizes that 'full-cost' arrangements may be modified when appropriate by provisions regarding disposition of equipment.

"6. Institutions should define their academic and fiscal policies and thus avoid differences and conflicts within their own organizations. To avoid disagreement about costs properly chargeable to contracts, they should follow clear accounting procedures themselves, and should insist on unambiguous and equitable contracts.

"7. Educational institutions should invite all research-sponsoring agencies, whether governmental, foundational, or industrial, to give more careful consideration to the advantages of institutional research grants

over the specific project type; and in their dealings with these agencies they should exert their utmost influence toward a wider application of the principle of institutional rather than project support of research, recognizing at the same time that there are research problems that can be attacked only on a project basis.

"8. The institution should make a continuous effort to see that its own faculty members are provided with sufficient information on overall costs and financial problems so as to minimize internal misconceptions over 'diversion' of part of contracts or grant funds to meet indirect costs."

To these recommendations most medical educators would be glad to add their amen.—D. F. S.

Visiting Teachers from Abroad

IT IS COMMON KNOWLEDGE that the great advances in knowledge have been made by men and women from a wide variety of cultures and nationalities. No nation has a monopoly on ingenuity and creative thinking, and there are few that fail to have outstanding contributors in at least one of the many fields of knowledge. So great is the advantage to world knowledge which results from the free interchange of teachers and scholars that it is a great satisfaction to note that during the present college year there are more than 628 foreign professors, instructors, lecturers and graduate assistants serving on faculties of colleges and universities of the United States. The Institute of International Education polled the 1,851 institutions of higher education listed in the Office of Education's "Education Directory" and received replies from 1,475 which made a very interesting report* possible.

These visiting teachers are widely scattered through the institutions of the whole country. New York State has 103 of them, Pennsylvania 80, Minnesota 66, Massachusetts 42, Wisconsin 40, Indiana 32. Ten of our states, however, have none this year.

The most common sponsorship for these visiting scholars is "an institution in the U. S." The next most common is "the U. S. government," the next "the visitor himself," the next "a private organization in the U. S." and the next "a private organization abroad."

By far the most common field of interest represented by these scholars is medicine with 137. The field of languages is represented by 59 scholars, chemistry by 55, physics by 42, engineering by 42, theology by 33, mathematics by 29, education by 27 and philosophy by 22.

The medical scholars came from the following areas of the globe: 62 from Europe, 33 from the Far East, 19 from North and Central America, 15 from South America, six from the Middle East and two from Oceania.

When one considers the values which accrue to higher education from an international interchange of teachers on this scale, one is completely unable to explain how the U.S.S.R. feels that it can afford to continue its dogged policy of isolation and exclusion. If consideration is being given to providing more interchange through the "Iron Curtain," certainly the exchange of teachers should receive high priority.—D. F. S.

*Institute of International Education: "Foreign Faculty Members in Institutions of Higher Education in the United States," New York City, January 29, 1955.

Our Readers Write

Report From London

Dear Editor:

I am pleased to comply with your suggestion that I prepare a letter to the Journal of MEDICAL EDUCATION to summarize the spirit, content and certain conclusions of the conference on "Selection, Training and Support of Medical Research Workers." This conference was organized by the Council for International Organizations of Medical Sciences, and held in London in October 1954.

The meeting was attended by 28 representatives of 17 countries, and the majority of the delegates were administrative officers of the national medical research agencies of their countries. For this reason it was most gratifying to those in attendance to discover that in spite of organizational differences, there was a large measure of agreement both on principles of research training and on the forms of support that should be provided.

The spirit of the group was truly excellent. It was obvious that most of the delegates had come to the meeting with misgivings, assuming that radical differences in thinking and the broad nature of the subject under discussion would together forestall any broad consensus. They had agreed to attend the meeting only because they believed that free exchange of ideas would be most beneficial. In a matter of hours, however, there seemed to be unanimous opinion that the meeting would prove most worthwhile and quite interesting. This immediate lifting of spirit and developing of optimism reflected in part the unsuspected similarity in thinking but, in greater part, the magnificent role of Sir Harold Himsworth. As chairman, he exhibited alertness, understanding and outstanding leadership that assured continuous concentration of attention and interest on the subject being discussed.

While other matters were studied during the week, such as the responsibilities of central research bodies, only those conclusions are included here which appear to concern the medical schools the most. These are briefly shown as follows:

1. Universities are generally the chief foci for the encouragement and support of medical research. The medical school and affiliated hospitals are the natural homes of scholarship, the ideal forum for the free exchange of views between workers in different disciplines and the main sources of recruitment and training of new workers.

2. While important research is conducted also in nonteaching hospitals and independent research institutions, preferably in such cases close association with the universities should be maintained through exchange of staff, participation in teaching where possible and postgraduate training.

3. Scientists must be free to do the research which has the most natural interest to them, and not tempted by funds or otherwise to slant their work toward the special interests of granting agencies. The investigator must have the right to determine himself the use of any funds allocated in support of his work.

4. Medical schools generally do not have the funds needed for research; consequently, the national government is obligated to help. The government funds should provide for both project support and for unrestricted grants. Medical schools are likely to lose their sense of responsibility for research if they do not have unrestricted research funds

from one source or another. Such funds promote leadership in the university and expedite research activities in ways not possible where all assistance comes in the form of project support.

5. Granting agencies should seek the advice of medical scientists with personal experience on the administration of research grant or contract programs. Reviewing committee members should be selected only from the nominations of the scientists.

6. Selection of potential young investigators for training should be the responsibility of the experienced investigators who know them and their work and who have knowledge of their interests and opinions of their capabilities.

7. Research fellowships should be available to medical students who wish to obtain additional training on part time and to those who wish to take a year or more of full-time intensive training, including the students who temporarily drop regular medical school courses in order to get the extra training.

8. The trainee should train with the senior investigator but must be given the maximum possible independence. He will learn research by doing research but he will not learn enough if he is assigned to routine tasks in a single laboratory. Desirably, he will broaden his experience through work in other laboratories.

While not one of these conclusions will reflect anything new to the average medical school staff, the fact that the representatives of 17 countries reached unanimous agreement on them probably will be of considerable interest—*Ernest M. Allen*, chief, division of research grants, National Institutes of Health.

1955 Borden Award

Nominations are open for the Borden Award in the Medical Sciences for 1955. This award, established in 1946 by the Borden Company Foundation, Inc., and the AAMC, consists of $1,000 in cash and a gold medal, presented for outstanding clinical or laboratory research in a medical school holding membership or affiliate membership in the Association.

Nominations may be made by anyone on the faculty of an AAMC member school for research which has been published, during the preceding five calendar years. No person may receive more than one Borden Award for the same research, although he may receive a later award for different research, and a nominee who fails to receive the award may be renominated for the same work in a subsequent year.

All nominations must be submitted by August 1, 1955. Further information may be received from Dr. Dean F. Smiley, secretary, Association of American Medical Colleges, 185 N. Wabash Ave., Chicago 1, Ill.

NEWS DIGEST

Executive Council Meeting

Approval of by-law changes, made necessary by the incorporation of the Association, was voted by members of the Executive Council during their February 4-5 meeting in Chicago. Meeting for the time as the Board of Directors of the new corporation, the Council named as the first officers those persons named in the By-Laws.

The second act of the meeting was to approve: (1) a statement of "Procedures Approved by the Executive Council" as it was presented, (2) a resolution that the secretary and director of studies be appropriately bonded, (3) the necessary bank resolutions with respect to the designation and authorization of depositaries of the Association's funds, and (4) a time schedule for the construction of new Association headquarters in the Evanston area. The third act of this meeting was passage of a resolution expressing the Association's wholehearted appreciation of Dr. Joseph C. Hinsey's laborious and persevering efforts in obtaining the grants for the Association's new headquarters building.

In December 1954, the incorporation proposal was submitted by mail to the 81 voting institutional members of the AAMC. Approval was expressed by 80 member schools. In compliance with this vote, the Articles of Incorporation were filed in the office of the Secretary of State of Illinois on January 20, 1955, and recorded in the office of the Recorder of Deeds of Cook County, Illinois, on January 24, 1955.

Special Meeting: Following action by the Council, a special meeting of representatives of all institutional members was called for February 7. Sixty-eight institutional members were represented by an official or a signed proxy at this session, and they unanimously approved the resolution passed by the Council, as follows: "*Resolved*, that the by-laws presented to this meeting be and they hereby are adopted as the By-Laws of the Association of American Medical Colleges, and that the Officers named in said by-laws as the first officers of the Association shall be and serve as the first officers of the Association until the first Annual Meeting of members unless their incumbency of their respective offices shall be sooner terminated as provided in the by-laws."

During the special meeting, President Vernon W. Lippard appointed an *ad hoc* committee to review the by-laws and recommend possible changes to the Executive Council so that these changes could be offered to the membership for action at the next regular Annual Meeting in October 1955. Committee members are: Stanley E. Dorst, chairman: George A. Bennett, Walter A. Bloedorn and John M. Stalnaker.

Other Council Actions: Other business discussed by the Executive Council at the February meeting include:

—Approval of general plans for the Teaching Institute on Anatomy and Anthropology, October 19-22, at the New Ocean House, Swampscott, Mass., and for the 66th Annual Meeting, October 24-26, at the same place.

—Approval of recommendations from the Committee on Public Information:

(a) That the Council go on record as recognizing that public information has a very significant role to play in the medical schools of today.

(b) That the Council go on record as recognizing the acute shortage of men with proper training or experi-

ence in the field of medical public information, and that it constitutes a serious problem for the medical schools of today.

(c) That the Council go on record as recognizing that appropriate ways and means be devised to alleviate this shortage.

The Council, however, referred back to the committee for further study the recommendation as to implementation of the above recommendations. It was further suggested that the committee chairman be invited to attend the June Council meeting to discuss this whole matter.

—Approved cooperation of the Association with the Council on Medical Service of the AMA in the study of the methods of recompensing clinical teachers in medical schools. Members of the AAMC staff were authorized to cooperate in the fact-finding study which is to be developed.

—Approved in principle the plan suggested by the Cooperating Committee on Graduates of Foreign Medical Schools.

—Accepted, upon recommendation of Dr. J. Edwin Foster, three grants to the Medical Audio-Visual Institute from pharmaceutical houses for developing medical teaching aids.

—Appointed a committee to confer with federal officials on changing the present methods of administering the doctor draft law.

Reports: Some of the special reports presented to the Council were:

1. Opinions of institutional members on the recommended admission procedures ("traffic rules"). As reported by John M. Stalnaker, 61 definitely favored the recommendations, six were negative, four definitely refused to accept and 12 did not reply.

2. A progress report on the MEND program, which pointed out that 10 new schools were added on January 1. The 1955 budget, as reported by Dr. Stanley Olson, includes $11,000 per school, of which $5,000 will be given outright as funds to provide the local coordinator. The remaining $6,000 is to go into a travel pool from which each school can be reimbursed for sending its staff members and coordinators to essential meetings. Another $20,000 a year is provided for a full-time coordinator and his secretarial staff.

A vote of appreciation was given Dr. Olson for his perseverance and tact in saving the MEND program from what looked to be abandonment at one time.

3. An explanation by Dr. George Packer Berry of the finances of the 1953, 1954 and 1955 Teaching Institutes. Dr. Berry also discussed the seven topic areas to be explored at the 1955 Institute.

4. An outline of plans for development of a group of foreign correspondents for the solicitation of special articles, and the development of symposium issues of the Journal of MEDICAL EDUCATION was presented by Dr. John Z. Bowers.

Markle Fund Grants $660,000

The John and Mary R. Markle Foundation has announced that 22 faculty members of medical schools in the United States and Canada have been appointed "scholars in medical science," in continuance of the program started in 1948.

The foundation has appropriated $660,000 toward support of these doctors and their research, to be granted at a rate of $6,000 annually over a five-year period. Total appropriations by the fund for these scholars now have reached $4,600,000, and 158 students in 66 medical schools have been aided. The Markle Foundation was established in 1927 by John Markle, a Pennsylvania coal operator, with an initial endowment of $3 million.

The new scholars appointed and their affiliations are:

Dr. E. Lovell Becker, assistant professor of medicine (after July 1), Medical College of Virginia; *Dr. Lewis William Bluemle Jr.*, associate in medicine, University of Pennsylvania School of Medicine; *Dr. Harvey R. Butcher Jr.*, instructor in surgery,

Washington University School of Medicine; *Dr. Leighton E. Cluff,* instructor in medicine (after July 1), John Hopkins University School of Medicine; *Dr. Julius J. Cohen,* instructor in physiology, University of Cincinnati College of Medicine; *Dr. T. W. Fyles,* instructor in medicine (after July 1), University of Manitoba Faculty of Medicine; and *Dr. Paul M. Gagnon,* assistant in anatomy, Laval University Faculty of Medicine.

Others appointed are: *Dr. Neal B. Groman,* assistant professor in microbiology, University of Washington School of Medicine; *Dr. John William Harris,* assistant professor of medicine, Western Reserve University School of Medicine; *Dr. Alanson Hinman,* instructor in pediatrics and associate in neuropsychiatry, Bowman Gray School of Medicine; *Dr. Frederick G. Hofmann,* associate in pharmacology, Columbia University College of Physicians and Surgeons; *Dr. Edward H. Hon,* instructor in obstetrics and gynecology (after July 1), Yale University School of Medicine; *Dr. Ralph Beverley Lynn,* assistant professor of surgery, University of Saskatchewan; and *Dr. William Sanford Lynn Jr.,* associate in medicine (after July 1), Duke University School of Medicine.

Additional appointments included: *Dr. C. Arden Miller,* assistant professor of pediatrics, University of Kansas School of Medicine; *Dr. Gerald T. Perkoff,* instructor in medicine, University of Utah College of Medicine; *Dr. George G. Rowe,* associate in medicine, University of Wisconsin Medical School; *Dr. Richard H. Segnitz,* instructor in surgery, Marquette University School of Medicine; *Dr. Cheves McC. Smythe,* instructor in medicine (after July 1), Medical College of South Carolina; *Dr. David W. Talmage,* assistant professor of medicine, University of Chicago Division of the Biological Sciences; *Dr. Harold Tivey,* assistant professor of radiology, Baylor University College of Medicine; and *Dr. Harry L. Williams,* assistant professor of pharmacology, Emory University School of Medicine.

Health Careers Guidebook

The National Health Council, as part of its Health Career Horizons project, has published a 160-page text and picture documentary book called "Health Careers Guidebook."

The guidebook covers 156 different occupations in all kinds of health services from hospital maintenance to creative scientific research. The publication will be distributed without charge to all of the nation's more than 29,000 secondary schools and junior colleges. Designed primarily as a counseling tool, the book is intended to stimulate interest in the health fields among teen-agers.

Director of Public Health School

Dr. Ray E. Trussell, currently the director of the Hunterdon Medical Center, Flemington, N. J., has been appointed first executive officer of the newly organized school of public health and administrative medicine at Columbia University. His appointment is effective July 1. Dr. Trussell was also named DeLamar professor of administrative medicine and associate dean for public health in the faculty of medicine.

The new institution was formerly known as the school of public health and also includes the five-year old institute of administrative medicine.

Washington U. Alumni Honored

A luncheon in honor of 57 of Washington University's outstanding alumni was held recently in St. Louis, with Abram L. Sachar, president of Brandeis University, as the principle speaker.

Among those who received awards for outstanding achievement were Dr. Joseph C. Hinsey, director of the New York Hospital-Cornell Medical Center; Dr. Warren H. Cole, head of the department of surgery, University of Illinois College of Medicine; Dr. Benno E. Lischer, dean emeritus,

Washington University Dental School and Dr. Frederick Woodruff, associate professor emeritus of clinical ophthalmology, Washington University School of Medicine.

"Stop Rheumatic Fever" Film

A motion picture entitled "Stop Rheumatic Fever," intended for public release, was produced recently by the National Heart Institute in cooperation with the American Heart Association.

The film shows treatments and research for rheumatic fever, which is the leading killer and crippler among childhood diseases, and which, with the heart disease that often follows it, accounts for 20,000 deaths in the United States each year. The film may be purchased from the American Heart Association Film Library, 13 East 37th St., New York 16.

Human Health Study Program

The New York Hospital-Cornell Medical Center has established a long-term study program called "Human Health and the Ecology of Man," designed to investigate the manner in which man's reaction to his environment affects his health.

The investigations will be under the sponsorship of the department of medicine, and will be carried out through the Medicine "A" Clinic, which is under the direction of Dr. Harold G. Wolff.

Studies which are now under way include an investigation of variations in human reactions to an environment which has essentially uniform physical aspects and a study on human adaptive reaction patterns relevant to disease.

Vitamin Foundation Meeting

Appropriations by the National Vitamin Foundation for grants-in-aid for research, fellowships and public health purposes have totaled more than $1 million since the foundation was established in 1946. The appropriation report was made at the foundation's 10th annual meeting in New York on March 1.

The meeting was highlighted by a symposium on "The Antimetabolites —Their Modes of Action and Therapeutic Implications," concerned with the antagonistic action which these substances have against certain natural functions of the body.

Dr. W. H. Sebrell Jr., director of the National Institutes of Health, was re-elected president, and Dr. E. Gifford Upjohn, president of the Upjohn Co., Kalamazoo, Mich., was re-elected chairman of the board.

Pan American Association Meeting

The 10th Inter-American Congress of the Pan American Medical Association was held in Mexico City, March 25-31, and included moving pictures, panel discussions, scientific and technical exhibits.

The association has 42 medical sections including the new section on general practice, and all of the divisions took part in the programs. Four days were spent in scientific sessions, and the next three days were devoted to sightseeing in and around Mexico City. Dr. Pedro A. Gutierrez Alfaro, minister of sanitation and public welfare of Venezuela, is president of the association, and Dr. Joseph J. Eller, of New York, is executive director.

"Pain" Exhibit

An exhibit on "The Conquest of Pain" was officially opened at the Museum of Science and Industry, Chicago, on March 15. This exhibit, which includes presentations on heart disease and the history of medicine, is under the auspices of the museum, the American Society of Anesthesiologists and Abbott Laboratories.

Runyon Fund Grants

In February the Damon Runyon Memorial Fund for Cancer Research allocated $68,800 for projects being conducted in the United States and in Belgium. Four universities—Columbia, Rochester, Washington and Wisconsin—were among the recipients.

College Briefs

California

The new $21 million facilities of the university medical center at San Francisco were dedicated on March 18, in public ceremonies. The 485-bed Herbert C. Moffitt Hospital and the first unit of the 14-story medical sciences building were formally

christened. Dr. JOSEPH C. HINSEY, director, New York Hospital-Cornell Medical Center, was the principle speaker.

The medical sciences building is occupied by the schools of medicine and nursing and the colleges of dentistry and pharmacy. The hospital will be opened in May.

Chicago Medical

The Max and Leola S. Epstein Foundation has presented the school with a gift of $150,000 for "support of medical education and medical service."

Dr. ALDO A. LUISADA has been named editor-in-chief of the forthcoming "Encyclopedia of Cardiology." The new two-volume encyclopedia, published by the American College of Cardiology, will cover the clinical aspects of cardiology and data and problems of allied sciences.

Dr. RUSSELL VON MILLISER has been promoted to professor of pathology.

Colorado

The Colorado Division of the American Cancer Society has announced a grant of $25,000 to the medical center for cancer research which will include studies in physical processes in normal and cancer cells and tissue, and in the role of certain hormones.

Dr. HERMAN I. LAFF, who was formerly associate clinical professor of otolaryngology, has been named acting head of the division.

The new director of postgraduate medical education is Dr. C. WESLEY EISELE, and Dr. HORACE JACKSON DODGE, professor of preventive medicine and public health, has been placed on military leave.

Emory

The 50th anniversary of the founding of the school of nursing will be celebrated in a special series of events on April 1 and 2. The highlight of the celebration will be an address by HELEN NAHM of the National League for Nursing.

The school has grown from an enrollment of 10 students, quartered in the basement of Atlanta's Wesley Memorial Hospital, to an enrollment of 204, with living and classroom facilities on the university campus. The school of nursing became affiliated with the university in 1922, and became an official part of Emory in 1944. The first dean was JULIA MILLER. ADA FORT, the present dean, was appointed in 1950.

Georgetown

Dr. MARTIN RUBIN, associate professor of chemistry in the graduate school, has been awarded a research grant of $20,000 by the National Institute of Arthritis and Metabolic Diseases, for a three-year study of new methods of treating iron diseases. He will investigate iron storage diseases.

Duke

A long standing tradition of allowing Duke students to meet some of their requirements by study at other medical schools, both in this country and abroad, is continued this year by four students who have gone to England to attend ward rounds, clinic sessions and lectures. Two of the students will be affiliated with the Radcliffe Infirmary, and two with St. Bartholomew's Hospital, London.

Over the 25 years this exchange system has been in operation, it is estimated that more than 1,500 Duke students have taken some part of their medical training at another school. The main advantage of this plan, according to Dr. W. C. DAVISON, dean of the school of medicine, is the opportunity to see how other hospitals and clinics handle their problems, particularly in a foreign setting.

Illinois

HERBERT E. LONGENECKER, dean of the graduate school at the University of Pittsburgh, will become vice president of the University of Illinois, in charge of the Chicago Professional Colleges. The appointment will be effective August 1.

Dr. Longenecker will fill the post formerly occupied by Dr. ANDREW C. IVY, who left in July 1953. The new vice president will be administrative head of the university's colleges of medicine, dentistry and pharmacy, the graduate college in Chicago, the school of nursing, research and educational hospitals, clinics, institutes and other health science units at the west side medical center.

Dr. Longenecker has been at Pittsburgh since 1938, and has served as graduate school dean there since 1946.

State U. of N.Y.—Brooklyn

A new annual lectureship was inaugurated at the college of medicine on March 8, under the auspices of the Austin Flint Society. Dr. FREDERIC D. ZEMAN, chief of medical services at the Home for Aged and Infirm Hebrews in New York, spoke on "The Nature of Medical Error."

The society was formerly known as the Medical History Club, and recently changed its name in honor of Dr. AUSTIN FLINT, professor of practical medicine and pathology on the college's first faculty in 1860.

Dr. JACK GROSS has received a grant of $10,280 for a study of the metabolism of radioactive thyroid hormones in tumor-bearing animals and tumor tissue.

N.Y.U.—Bellevue

The appointment of Maj. Gen. GEORGE ELLIS ARMSTRONG as vice chancellor for medical affairs at the university has been announced. Dr. Armstrong will assume his new post as chief administrative officer of the Bellevue Medical Center in July. He will retire as surgeon general of the Army at that time.

Dr. DONAL SHEEHAN, associate director of the medical center, has been acting director since the resignation in March 1953 of EDWIN A. SALMON.

A three-year scholarship in dermatology and syphilology has been announced by Dr. MARION B. SULZBERGER, professor and chairman of the department at the postgraduate medical school. The scholarship, which pays $3,000 a year, plus tuition, is open to graduates of approved

medical schools who have completed one year of internship. No applications will be accepted after May 31, 1955, for the class beginning the following October. Applications should be sent to the dean of the New York University Post-Graduate Medical School, 550 First Ave., New York 16.

North Carolina

The Atomic Energy Commission has approved the support of joint research by Dr. C. D. VAN CLEAVE and Dr. C. T. KAYLOR, the department of anatomy, with a grant of $10,500 annually for a three-year period. The grant will be used in the study of the double isotope effect of Ca^{45} and Sr^{89} on the pattern of distribution in the body, particularly in bone.

Dr. Van Cleave and Dr. Kaylor completed this year a five-year study under the same auspices on the distribution, retention and elimination of radioactive beryllium.

Oregon

Final plans are being completed for the 40th annual alumni association meeting, to be held on April 18-20. As in the past, the three-day meeting will be in conjunction with the Oregon Academy of General Practice and the Sommer memorial lectures.

DR. JAMES L. DENNIS, formerly associate professor of pediatrics at the University of Texas, will be the main speaker. The lectures will be given by Dr. HENRY L. BOCKUS, professor of medicine and chairman of the departments of medicine and gastroenterology at the University of Pennsylvania Graduate School of Medicine; Dr. PETER C. KRONFELD, professor of ophthalmology at the University of Illinois College of Medicine; and Dr. FRANCIS D. MOORE, surgeon-in-chief at Peter Bent Brigham Hospital.

Research grants totaling more than $58,000 were received in March by two faculty members. Dr. EDWIN E. OSGOOD, head of the department of experimental medicine, was awarded $48,578 by the National Advisory Cancer Council for research on the chemotherapy of leukemias and lymphomas. Dr. JOHN E. HARRIS, associate professor of ophthalmology, was awarded a grant of $9,790 for work on cations and hydration of the cornea and lens.

Another grant, for $29,160, from the National Institute of Neurological Diseases and Blindness, was awarded to Dr. ARCHIE R. TUNTURI, assistant professor of anatomy. He plans to purchase "Oscar," a semi-automatic electronic device for measuring time and voltage, and punching IBM cards which will be used in connection with Dr. Tunturi's research on the auditory system.

Rochester

Dr. ERLING JOHANSEN, senior fellow in dental research at the school of medicine and dentistry, has been appointed chairman of the department of dentistry and dental research.

Dr. Johansen succeeds Dr. JOHN W. HEIN, who has been named dental director of the Colgate-Palmolive Co. Both appointments were effective March 1.

Saint Louis

In recognition of his "genius and generosity," the university has honored its Nobel prize-winning biochemist, Dr. EDWARD A. DOISY, by naming the department of biochemistry for him.

The occasion of the honor was the 25th anniversary of the assignment of patent and licensor rights to the university by Dr. Doisy for the manufacture and sale of *Theelin*, the ovarian hormone which he and his associates isolated in 1929.

Tennessee

The new $1,750,000 chemistry-physiology building has been partially occupied, and undergraduate teaching has begun. This building adds a total of 70,000 square feet to the Memphis medical center, and is the first of three to be built under a $5 million expansion program.

Audiovisual News

Films Now Available from the Medical Audio-Visual Institute

THE MEDICAL AUDIO-VISUAL Institute is collecting films for use by the medical colleges. The library is being designed to make films more easily available to the colleges and, as a general policy, will include films which are not readily available from existing and commonly known sources. Initially, chief consideration will be given to films produced by medical schools and deemed suitable for mutual exchange. They will not all be teaching films but may be valuable for reference or report purposes.

As reported last month, Pfizer Laboratories, a division of Chas. Pfizer & Co., Inc., have provided the MAVI with a grant for the purchase of prints and equipment to develop the library. A rental is being charged to cover the costs of depreciation and obsolescence of films as well as the costs of handling, inspection and repair of films.

A catalogue will be issued in the fall of 1955. In the meantime, new titles will be announced in the Journal of MEDICAL EDUCATION. The titles on the following pages are now available.

Aortic Valve Movements. Preliminary Study of Unfixed Post-Mortem Valves ..... Rental: $4

7 min., si., color, 16 mm., 1952.

Shows in motion aortic valvular function and dysfunction as seen through camera windows over the aortic and pulmonic valves. The hearts are in a closed system with a mechanically simulated blood pressure, heart beat and cardiac output.

Author and Producer: Ian K. R. McMillan, M.D., cardiac department, St. Thomas' Hospital, London.

BIOPSY (Series—Cancer Short Teaching Films)

Sponsor: National Cancer Institute, Department of Health, Education and Welfare, Public Health Service; *Producer:* V. F. Bazilauskas, M.D., for the Medical Audio-Visual Institute.

Technique of Aspiration Biopsy in the Breast $3

6 min. (at sd. speed), si., color, 16 mm., 1954 (Sale: $34)

Shows needle penetration, tumor shaving, and aspiration on a sectioned soft clay model. This is followed by an actual demonstration performed on a breast.

Technique of Excision Biopsy..... $4

11 min. (at sd. speed), si., color, 16 mm., 1954 (Sale: $60)

A model is used to demonstrate an elliptical incision. This is followed by actual demonstration of skin preparation, tumor outlining, anesthesia administration, draping and excision.

Technique of Rectal Biopsy..... $2

3 min. (at sd. speed), si., color, 16 mm., 1954 (Sale: $20)

Shows a rectal lesion as seen through the scope and the use of biopsy forceps to take a bite of tissue near the margin of the lesion.

Technique of Skin Biopsy..... $2

6 min. (at sd. speed), si., color, 16 mm., 1954 (Sale: $36)

A model setup presents the principles of biopsy in stop motion animation, and an actual wedge biopsy is performed.

Cardiac Arrest $6

30 min. (at sd. speed), si., color, 16 mm., 1953.

A typical episode of cardiac arrest occurring in the operating room is shown, and the method of management demonstrated. The causes of cardiac arrest are discussed and experimental evidence is

shown illustrating one anesthetic etiologic agent. Prevention and treatment is emphasized.

Authors: J. Cuthbert Owens, M.D. and Henry Swan, M.D., University of Colorado School of Medicine.

A Cinematographic Study of the Function of the Mitral Valve in Situ..... $5

13 min., sd., color, 16 mm., 1952 (Sale: $85)

By means of the authors' newly developed circulatory shunt technique, the film shows in slow motion the movements of the mitral ring and valve through atrial and ventricular openings in dog hearts which are rendered bloodless in the left chambers.

Authors: Adrian Kantrowitz, M.D., Elliott S. Hurwitt, M.D. and Antol Herskovitz, Montefiore Hospital, New York. Revised for teaching with the assistance of Leo L. Leveridge, M.D., Medical Audio-Visual Institute.

A Concept of Maternal and Neonatal Care $5

26 min., sd., b&w., 16 mm., 1951 (Sale: $50)

This film shows a continuity of care offered the pregnant woman and her husband, from the first prenatal visit through delivery, hospital stay and return home with the new baby. The interrelationships of the medical team of obstetrician, pediatrician, nurses and hospital administrator underline the roles each play in the maintenance of physical safety and in the creation of confidence and comfort within the new family. In the hospital, emphasis is placed upon a balance of scientific facilities, educational experiences and homelike accommodations (rooming in).

Producers: John Parks, M.D., Preston A. McLendon, M.D., departments of obstetrics and pediatrics, George Washington University School of Medicine and Hospital, Washington, D.C.; and George C. Stoney, Medical Audio-Visual Institute.

Contractions of the Valve of the Foramen Ovale of a New Born Lamb..... $2

2½ min., si., b&w., 16 mm., 1940.

In the freshly excised heart of a newborn lamb the atrium is widely opened. The fingers of the demonstrator expose the interatrial septum with its patent foramen ovale. Spasmodic contractile movements of the atrial myocardium show the valve-like actions of the crescentic muscular septal wall flaps.

Authors: A. E. Barclay, J. Barcroft, D. H. Barron and K. J. Franklin, Physiological Laboratory and School of Anatomy, Cambridge, and the Nuffield Institute of Medical Research, Oxford.

Effect of Drugs on Gut Movements (Two Parts) $7

25 min., si., color, 16 mm., 1945.

Producer: department of pharmacology, University of South Carolina School of Medicine.

Part I (11 min.) $4

Observations of the open-abdomen of a rabbit under spinal anesthesia. Normal and drug affected movements of the same preparation are exhibited simultaneously.

Part II (14 min.) $4

Demonstration of the preparation of the Thiry-Vella fistula and the apparatus for recording intraluminal pressures. Typical results with opiates and atropine are shown. Morphine slowing of the rate of bolus propulsion is demonstrated.

Effects of Hemidecortication in the Dog..... $4

11 min., sd., b&w., 16 mm., 1947.

Shows the principle effects of complete surgical removal of one hemisphere of the cerebral cortex. Changes in reflexes, hemidecorticate rigidity, rotating behavior, and hemianopsia are demonstrated.

Author: W. N. Kellogg, M.D.; *Producers:* Audio-Visual Center, Indiana University.

Effects of Metallic Ions and Osmotic Disturbances on the Heart..... $4

12 min., sd., b&w., 16 mm., 1944.

Demonstrates how the activity of an isolated heart can be maintained through the employment of refined techniques and an ionic and osmotic equilibrium of body fluids. Shows how the heart fails when an excess of potassium, calcium or sodium ions is added to the perfusate and during dehydration.

Author: K. G. Wakim, M.D.; *Producers:* Audio-Visual Center, Indiana University.

For convenience, medical schools, departments or individual faculty members may have accounts which are payable annually or semi-annually.

Functional Morphology of the Liver..... $2
F.S., 65 frames, color, 35 mm., 1954 (Sale: $12)

After a brief introduction on the comparative and human embryology of the liver, this filmstrip shows by means of colored stereograms, coordinated with photomicrographs, the microscopic architecture of the liver according to the author's "sheet" theory. The coordination of the vascular and ductal systems with the parenchyma are shown. There is an appendix on surgical anatomy of the liver and on the structure of the liver of experimental animals.

Sponsors: Hektoen Institute for Medical Research of Cook County Hospital; *Author and Illustrator:* Hans Elias, Ph.D., associate professor of anatomy, Chicago Medical School; *Photography:* Robert J. Isley, Pilot Productions, Chicago.

GASTRO-INTESTINAL CANCER (Series—Cancer Short Teaching Films)

Sponsor: National Cancer Institute, Department of Health, Education and Welfare, Public Health Service; *Producer:* Norman P. Schenker, M.D., for Medical Audio-Visual Institute.

Carcinoma of the Esophagus: Advanced Cases $2
6 min. (at sd. speed), si., b&w., 16 mm., 1953 (Sale: $15)

Shows by means of cinefluorography, various irregularities of the esophageal wall created by carcinomas.

Cinefluorography: Robert Janker, M.D., University of Bonn, Germany.

Carcinoma of the Esophagus Invading the Trachea $2
6 min. (at sd. speed), si., color, 16 mm., 1953 (Sale: $35)

Shows by means of endoscopic cinematography and cinefluorography, the successive stages of an esophageal carcinoma invading the trachea.

Cinefluorography: Robert Janker, M.D., University of Bonn, Germany; *Endoscopic Cinematography:* Paul H. Holinger, M.D., University of Illinois College of Medicine.

The Normal Esophagus $2
6 min. (at sd. speed), si., b& w., 16 mm., 1953 (Sale: $15)

Shows by means of cinefluorography, the normal esophagus as observed when barium is swallowed.

Cinefluorography: Robert Janker, M.D., University of Bonn, Germany; George Ramsey, M.D.; J. S. Watson Jr., M. D., and S. A. Weinberg, University of Rochester School of Medicine and Dentistry.

The Normal Stomach..... $2
9 min. (at sd. speed), si., b& w., 16 mm., 1953 (Sale: $20)

Shows by means of cinefluorography peristalsis, normal tonus, hypertonus and hypotonus, and the pumping motion of the stomach's contents.

Cinefluorography: Robert Janker, M.D., University of Bonn, Germany.

Pathological Findings in the Stomach.... $2
7 min. (at sd. speed) si., b&w., 16 mm., 1953 (Sale: $20)

Shows by means of cinefluorography chronic gastritis, gastric ulcer and carcinoma at the lesser curvature and advanced carcinoma in the upper part of the stomach.

Cinefluorography: Robert Janker, M.D., University of Bonn, Germany.

How to Inoculate a Plate..... $4
8 min. (at sd. speed), si., color 16 mm.

Demonstrates by means of animation and actual photography how to smear pus on a blood plate.

Producers: Photographic Department St. Mary's Hospital Medical School, London.

Observation of Human Ovulation by the Pelviscope $8
17 min., sd., color, 16 mm., 1953 (Sale: $110)

Opening scenes show the instruments used including a self-retaining vaginal retractor. Entry into the pelvic cavity is made through an incision of the posterior fornix revealing the ovaries and tubes. Observations shown include: location of the tubes and the fimbrial orifices, peristaltic waves of the tubes, an unruptured follicle, perifollicular hemorrhage, intrafollicular hemorrhage, slow seepage of liquor folliculi, and clotting. Photomicrographs of a one-hour corpus luteum are shown.

Author: Joseph B. Doyle, M.D., Tufts College Medical School.

Plastic Planing of the Skin..... $2
14 min., si., color, 16 mm., 1953.

Shows the author's technique for corrective surgical planing of the skin for skin defects, using a motor-driven wire brush on facial skin frozen with ethyl chloride.

Author: Abner A. Kurtin, M.D., New York.

Principles of Fracture Reduction..... $7
30 min., sd., color, 16 mm., 1953 (Sale: $163.84)

The principles of traction are presented in animation and in orthopedic scenes. Farmhouse emergency fracture handling by a physician in cases of ulnar, humeral, tibial and femoral fractures is demonstrated in terms of the principles while utilizing simple materials, untrained auxiliary personnel and crude methods.

Sponsor: department of medicine and surgery, Veterans Administration; *Producer:* Churchill-Wexler Film Productions, Los Angeles; *Scientific Adviser:* William Larmon, M.D., Northwestern University.

RECTAL CANCER (Series—Cancer Short Teaching Films)

Sponsor: National Cancer Institute, Department of Health, Education and Welfare, Public Health Service; *Producer:* V. F. Bazilauskas, M.D., for the Medical Audio-Visual Institute.

Digital Rectal Touch Picture: Normal.... $3
4 min. (at sd. speed), si., color, 16 mm., 1954 (Sale: $26)

Demonstrates visually, by means of animation, the mental palpation picture in the normal rectum.

Principles of Anoscopy $3
6 min. (at sd. speed), si., color, 16 mm., 1954 (Sale: $35)

Shows anoscopy as demonstrated on sectioned sponge rubber models of the male pelvis.

Principles of Digital Rectal Examination $2
3 min. (at sd. speed), si., color, 16 mm., 1954(Sale: $17)

Shows rectal digital examination as demonstrated on sectioned sponge rubber models of the male pelvis.

Principles of Proctosigmoidoscopy..... $3
7 min. (at sd. speed), si., color, 16 mm., 1954 (Sale: $40)

Shows proctosigmoidoscopy as demonstrated on a sagitally sectioned sponge rubber model of the male pelvis.

Principles of Prostatic Massage..... $2
3 min. (at sd. speed), si., color, 16 mm., 1954 (Sale: $20)

Prostatic massage, in conjunction with a digital rectal examination, is demonstrated on a sagitally sectioned sponge rubber model of the male pelvis.

Proctosigmoidoscopy $3
7 min. (at sd. speed), si., color, 16 mm., 1954 (Sale: $40)

Shows instrument checking, patient positioning and draping, and use of the proctoscope. A sample endoscopic view during withdrawal of instrument is given.

Technique of Anoscopy..... $3
6 min. (at sd. speed), si., color, 16 mm., 1954 (Sale: $35)

Shows anoscopy of a patient in the left lateral and knee-shoulder positions.

Technique of Digital Rectal Examination in the Female $3
4 min. (at sd. speed), si., color, 16 mm., 1954 (Sale: $33)

Shows digital rectal examination on patients in the knee-shoulder, lithotomy, and left lateral or semi-prone positions.

Reminiscences of the Early Days of the Medical School—Johns Hopkins University $2
11 min., sd., b&w., 16 mm., 1932

Presents a discourse by Dr. Welch, professor of pathology, Johns Hopkins University, on some of his recollections of important contributions of laboratory science to medicine and mankind.

Producers: Johns Hopkins University School of Medicine.

RESPIRATORY CANCER (Series—Cancer Short Teaching Films)

Sponsor: National Cancer Institute, Department of Health, Education and Welfare, Public Health Service. Produced for the Medical Audio-Visual Institute.

Acquired Lesions of the Epiglottis..... $2
6 min. (at sd. speed), si., color, 16 mm., 1953 (Sale: $40)

Shows by means of mirror laryngoscopy cases of trauma, cases of inflammation, and case of neoplasm.

Producer: Norman P. Schenker, M.D.; *Endoscopic Cinematography:* Louis H. Clerf, M.D., Jefferson Medical College of Philadelphia.

Contact Ulcers and Granulomas of the Vocal Cords $2
4 min. (at sd. speed), si., color, 16 mm., 1953 (Sale: $30)

Shows, by animation, the typical locations of ulcers and granulomas and, by means of laryngoscopy, shows contact ulcers and various granulomas.

Producer: Norman P. Schenker, M.D.; *Endoscopic Cinematography:* Louis H.

Clerf, M.D., Jefferson Medical College of Philadelphia.

Cysts and Polyps of the Vocal Cords.... $2
6 min. (at sd. speed), si., color, 16 mm., 1953 (Sale: $45)

Shows, by animation, the typical location of many cysts and polyps, and by means of direct mirror laryngoscopy, various cysts, polyps and combined lesions.

Producer: Norman P. Schenker, M.D.; *Endoscopic Cinematography:* Louis H. Clerf, M.D., Jefferson Medical College of Philadelphia.

Malignant Tumors of the Lungs..... $2
6 min. (at sd. speed), si., b&w., 16 mm., 1953 (Sale: $20)

Shows by means of cinefluorography the normal lungs, bronchiogenic carcinoma, carcinoma with abcess formation, metatases of seminoma, metastases of sarcoma and metastases of sarcoma with bilateral spontaneous pneumothorax. (Note: A continuous loop of film which repeats the last sequence may be purchased for $3.

Producer: Norman P. Schenker, M.D.; *Cinefluorography:* Robert Janker, M.D., University of Bonn, Germany.

Principles: Collection of Bronchial Washings $2
4 min. (at sd. speed), si., color, 16 mm., 1954 (Sale: $25)

The introduction of saline, washing and the return of saline are demonstrated with a frontally sectioned tracheobronchial tree rubber model.

Producer: V. F. Bazilauskas, M.D.

Principles of Bronchoscopy $3
5 min. (at sd. speed), si., color, 16 mm., 1954 (Sale: $30)

Sectioned sponge rubber models of the head and tracheobronchial tree are used to demonstrate the application of anesthetic and the inspection of the bronchial openings and tributary bronchi. A biopsy of a simulated lesion is made through a bronchoscope.

Producer: V. F. Bazilauskas, M.D.

Technique: Collection of Bronchial Washings $3
4½ min. (at sd. speed), si., color, 16 mm., 1954 (Sale: $26)

A patient is used to demonstrate techniques of applying anesthesia spray and collecting washings from the upper left lobe.

Producer: V. F. Bazilauskas, M.S.

Technique of Bronchoscopy $3
7 min. (at sd. speed), si., color, 16 mm., 1954 (Sale: $40)

A patient is used to demonstrate the techniques of applying anesthesia, the positioning of head and body, and the introduction of the scope through the mouth, pharynx and larynx. A biopsy is performed on a lesion.

Producer: V. F. Bazilauskas, M.D.

Vocal Nodules $2
2½ min. (at sd. speed), si., color, 16 mm., 1953 (Sale: $24)

The typical location of nodules and their interference with approximation of the cords is shown by animation. Laryngoscopy shows normal cords with tight apposition in phonation and vocal nodules which make cord approximation difficult or impossible.

Producer: Norman P. Schenker, M.D., *Endoscopic Cinematography:* Louis H. Clerf, M.D., Jefferson Medical College of Philadelphia and Paul H. Holinger, M.D., University of Illinois College of Medicine.

SUBCUTANEOUS BLOOD FLOW IN THE BAT (Series) $8
Authors: Richard L. Webb, Ph.D., and Paul A. Nicoll, Ph.D.; *Producers:* Audio-Visual Center, Indiana University.

Active Vasomotion $4
11 min., sd., b&w., 16 mm., 1948.

Demonstrates active vasomotion as it occurs in arterioles, terminal arterioles and precapillary sphincters and as it affects the capillary bed in a bat's wing.

Behavior of Blood and Vascular Components $4
11 min., sd., b&w., 16 mm., 1948.

Detailed reactions of the minute vessels and the blood which modify the flow through these regions are demonstrated by high magnification of a bat's wing. The form and behavior of the platelets within the circulation are shown before and after a mild injury.

Vascular Patterns $4
11 min., sd., b&w., 16 mm., 1948.

Introductory scenes show the tech-

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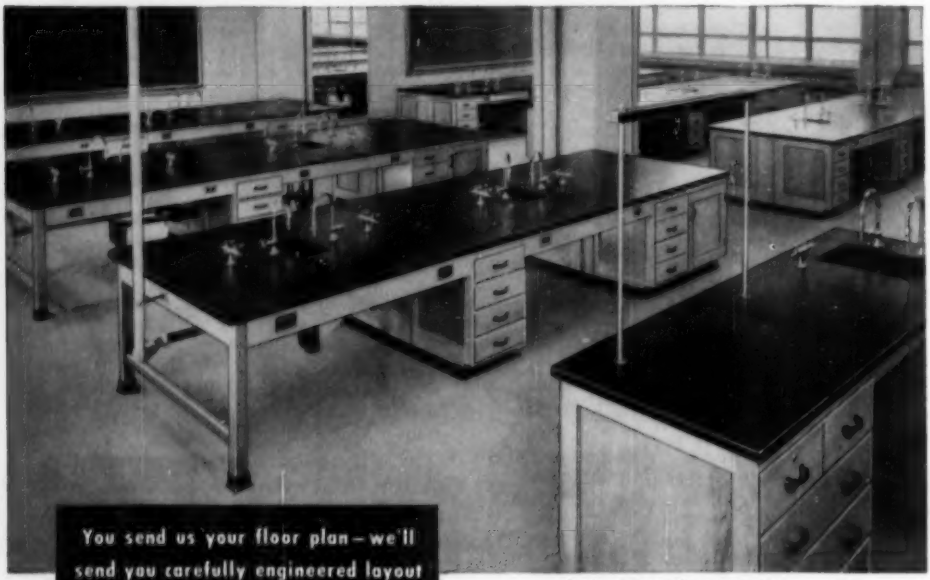

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niques used for mounting bats and recording the circulation in their wings. A view of the general distribution of the vascular components is followed by more detailed views of flow behavior in the various vessels, examples of lymphatic action, and the flow across the capillary bed.

Technic of Injection in Animals (Two Parts)

27 min., si., color, 16 mm.

Producers: department of pharmacology, University of South Carolina School of Medicine.

Part I (12 min.)..... $4

General instructions and precautions in the use of syringes and needles.

Part II (15 min.)..... $5

Demonstration of the various routes of injection in different animals.

Thrombotic and Embolic Phenomena..... $2

5 min., sd., b&w., 16 mm., 1948 (Sale: $25)

Cinemicrographic views of vessels show the swift central current of red cells and the slow peripheral current of plasma containing white cells. In a slowed stream, more white cells and some platelets agglutinate, and bits of this beginning thrombus break away as emboli into the blood stream. The effect of eddy currents is demonstrated to show why vein valves are often the sites of thrombi.

Sponsor: F. Hoffmann-LaRoche & Co., Ltd., Basle, Switzerland; *Producer* Norman P. Schenker, M.D., in cooperation with the Gynecological and Obstetrical Clinic, Cantonal Hospital, Geneva, Hubert de Watteville, M.D., and the department of medical research, F. Hoffman-LaRoche & Co., R. Jurgens, M.D.

Training for Childbirth—A Program of Natural Childbirth with Rooming-In.... $8

28 min. (at sd. speed), si., color, 16 mm.

Shows certain aspects of mother and newborn care as carried out at the Grace-New Haven Community Hospital (University Service). The sequences show the patient and her husband in a series of views of their clinic and hospital experience. The film contains copious descriptive titling.

Authors: Herbert Thoms, M.D., and members of the obstetric and pediatric staffs of the Yale University School of Medicine.

Visual Surgery in the Open Heart During Hypothermia $8

25 min., sd., color, 16 mm., 1953.

A patient is shown being cooled in a tub of ice water, preparing her for open heart surgery. The problems connected with this process are discussed. Operative scenes of three open heart procedures are shown: (1) plastic repair of the pulmonary valve for pulmonic valvular stenosis; (2)) direct vision excision of infundibular stenosis for treatment of Tetralogy of Fallot; and (3) direct suture of interauricular septal defect. Technical methods relating to the opening and closure of the heart are discussed.

Author: Henry Swan, M.D., University of Colorado School of Medicine.

MAVI Receives Grant

The Medical Audio-Visual Institute has accepted a three-year grant of $30,000 from Abbott Laboratories of North Chicago, Ill., for the editing and production of short teaching films on living histology.

The research footage and facilities of the tissue culture laboratory of the University of Texas, Medical Branch, will be utilized to produce a series of films showing the anatomy and dynamics of various kinds of human tissue.

Dr. Charles M. Pomerat, director of the tissue culture laboratory, is well known for his illustrated lectures both in this country and abroad.

Film Information Wanted

The Medical Audio-Visual Institute is seeking information on films which are relatively unknown or inconvenient to procure, but which have been found to be of significant value for use in the medical schools, particularly for teaching. Such films are desirable for inclusion in the medical colleges' film library.

In a preliminary survey of the medical colleges, some 125 college-produced films were reported as being of potential value. The Institute desires to know of all films of value so that selection for the library can be made.

Book Reviews

Textbook of Operative Surgery

Eric L. Farquharson, M.D. Williams & Wilkins Co., Baltimore, 1954. 841 pp. with index. $15.

The author, with the encouragement of the late Sir John Fraser, has undertaken the preparation of this text primarily for the junior surgeon in training. Operations likely to be undertaken by the junior surgeon are described in considerable detail. The more complicated procedures, wherein the junior surgeon is more likely to be an assistant, are more summarily handled, but the broad objectives of the procedure are presented. This distinction is well exemplified in the chapter on thoracic surgery wherein 12 pages are devoted to empyema, and lobectomy and pneumonectomy are covered by one-and-a-half pages of fine print. There is broad coverage of the general aspects of specialty surgery.

The author's apology for solitary authorship is unnecessary. Indeed, the balanced perspective could hardly have been achieved in any other way. The text flows clearly and easily with the aid of well-chosen illustrations. Certain recommendations are at variance with current American practices, i.e., the injection of sclerosing agents after high ligation of saphenous varices; through-and-through drainage of abscesses of the pulp spaces of the finger; lack of emphasis upon fasciotomy in the initial surgery of wounds; and the treatment of acute cholecystitis with hot fomentations. These in no way detract from the general excellence of the text.

It is felt that this volume has quite commendably achieved its purpose and should be of considerable value to the junior surgeon beginning his residency training.

Champ Lyons, *Alabama*

Human Physiology, 2nd edition

Bernardo A. Houssay, M.D.; **Juan T. Lewis,** M.D.; **Oscar Orias,** M.D.; **Eduardo Braun-Menendez,** M.D.; **Virgilio G. Foglia,** M.D. and **Luis F. Leloir,** M.D. Translated by **Juan T. Lewis** and **Olive Thomas Lewis.** McGraw-Hill Book Co., Inc., New York, 1954. 1116 pp. with index. $12.

This book, now in the second edition, is written primarily for medical students and doctors of medicine. It presents in an interesting fashion the basic principles of modern physiology.

It is the work of a group of scientists who have done outstanding research; but more important for the purpose of writing a text, the group has an enviable cosmopolitan knowledge of the whole of physiology. This qualified them well for the task of writing a physiology text.

The leader of the group is Bernardo A. Houssay, who is known by all elementary students of physiology for his pancreatectomized - hypophysectomized dog—the Houssay dog. Houssay is a winner of a Nobel award and his brilliant Dunham lectures at Harvard University proved him to be an outstanding lecturer and teacher.

This book pulls together principles from the basic courses in chemistry, physics, mathematics, comparative anatomy, embryology and zoology in terms of their importance for human physiology. It does an excellent job in presenting the theoretical side of physiology giving patent recognition to the fact that the theoretical principles of today become the practical applications of tomorrow.

While the subject matter of this book is organized into the traditional areas—blood and circulation, respiration, digestion and metabolism, endocrines, and the nervous system—the coverage is somewhat more adequate, better balanced and integrated than other texts currently available. The endocrine section is, in particular, outstanding. The authors have thoroughly revised the text, the material has been brought up-to-date, and many chapters have been rewritten for this new edition. R.A.D.

Textbook of Biochemistry, 2nd edition

Edward Staunton West, Ph.D. and **Wilbert R. Todd,** Ph.D. The Macmillan Co., New York, 1955. 1356 pp. with index. $12.

This revision of West and Todd's "Textbook of Biochemistry" ensures that this book will remain a standard

text for some time to come. Although the revision is not so extensive as to make the older edition obsolete, many sections of the book have been rewritten. Most important of the changes are the inclusion of the concept of intervention of Coenzyme A in the metabolism of fats and carbohydrates and the complete rewriting of the section dealing with the biosynthesis of proteins. Additions have been made to almost every chapter to bring the book up-to-date. Other new topics discussed include lipoic acid and the formation of porphyrins.

The changes made in this text have in no way altered the scope or the thoroughness for which the first edition became known. The discussion of the chemistry and metabolism of the various constituents which make up the animal organism is both lucid and complete.

Although the scope of this book is somewhat broader than is necessary for the average medical biochemistry course, the book may serve as a valuable reference book after the student is finished with it as a text.

Arthur H. Smith, *Wayne*

Handbook of Radiology

Russell H. Morgan, editor. **Kenneth E. Corrigan,** associate editor. The Year Book Publishers, Chicago, 1955. 518 pp. with index.

As stated in the preface, " 'The Handbook of Radiology' is a compilation of quantitative data which, it is hoped, will be useful to workers engaged in the clinical, experimental and industrial applications of ionizing radiations."

The subject matter is arranged in the following sections: 1. Definitions of physical terms and units (including conversion formulae and tables), general, electricity and magnetism, radiation (ionizing), radiation (light), physical chemistry and conversion tables; 2. General physical information (including biophysical data); 3. Radiotherapeutic data, depth dose data for X-rays, gamma rays and high-energy electrons and radium dosimetry; 4. Radioisotopes; 5. Radiography and fluoroscopy, characteristics of medical materials, characteristics of industrial materials, contrast media used in radiographic examinations and radiographic technique and radiation protection. There are four appendices dealing with common drugs used in radiology, mathematical tables, the Greek alphabet and schematic diagrams of X-ray generators and particle accelerators.

The editors had the valuable assistance of an impressive group of collaborators, many of whom are well known in the field of radiation research. It is your reviewer's opinion that they should be congratulated upon bringing out this book which is recommended without reservation as a valuable addition to the library of everyone interested or engaged in the field of radiology.

E. A. Pohle, *Wisconsin*

Manual of Hand Injuries

H. Minor Nichols, M.D. The Year Book Publishers, Inc., Chicago, 1954. 343 pp. with index. $9.50.

In general this book reflects the experience of the author with a large number of injuries of the hand, many of which are shown in clear photographs.

The pertinent surgical anatomy of the distal forearm and hand is quite well shown by a series of seven clear black and white plates. The chapters on pre- and postoperative care is a good general outline except that methods of examination of the injured hand are not described. Methods of peripheral anesthesia are well covered. The very serious complication of Wolkman's Contracture is only briefly mentioned and could be dealt with in more detail in a book of this type, since its early detection and treatment is so important in avoiding the ravages this complication can cause.

The author rightfully points out the meaningless division between minor and major injuries in the hand, since crippling infections can enter through small openings. However, he uses the heading of minor injuries and for some reason includes arterial and joint wounds under this heading.

The chapter on burns is a good resume of present day knowledge of systemic as well as local treatment. Tendon injuries are well covered and the various methods of tendon repair are well shown. The treatises on nerve injuries, fractures and infections are competent.

This book is essentially a compilation of the present knowledge regarding the primary treatment of injuries of the hand and will be of value to persons dealing with these conditions as well as students.

Elden C. Weckesser, *Western Reserve*

Textbook of Microbiology, 16th edition

William Burrows, Ph.D. with the collaboration of **F. B. Gordon,** Ph.D., M.D.; **R. J. Porter,** Ph.D. and **J. W. Moulder,** Ph.D. W. B. Saunders Co., Philadelphia, 1954. 824 pp.

Herbut — Pathology

By PETER A. HERBUT, M.D.

Professor of Pathology, Jefferson Medical College and Director of Clinical Laboratories, Jefferson Medical College Hospital, Philadelphia, Pa.

NEW. Important pathologic changes encountered in the daily practice of medicine are presented clearly and concisely in this well-organized work. In preparing the text for undergraduate medical students, Dr. Herbut has been aware of the need for a logically presented, well-illustrated factual work, with ample correlated clinical material. In being complete without unessential details, the book more than meets these requirements. It is based upon the author's didactic pathologic lectures given at Jefferson Medical College, and defines the subject in accordance with the five major categories of disease.

New. About 1025 Pages, 7" x 10". 1378 Illustrations on 651 Figures and 6 Plates in Color. Just Published.

Babcock's Principles and Practice of Surgery

Edited by KARL C. JONAS, B.S., M.D., M.S. (Surg.), F.A.C.S., F.I.C.S.

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Grollman — Pharmacology and Therapeutics

By ARTHUR GROLLMAN, Ph.D., M.D., F.A.C.P.

Lecturer in Pharmacology and Toxicology, Medical Branch; Professor and Chairman, Department of Experimental Medicine, The Southwestern Medical School, University of Texas, Dallas

2nd Edition. Students who want a sound foundation for the rational and scientific use of drugs will find it in this complete presentation. Dr. Grollman describes actions, indications, toxic effects, dosages and methods of administration of all the official drugs. This edition includes those drugs which have become available since the previous edition. There is a new chapter on the pharmacology of the kidney, with an evaluation of diuretic drugs in medicine. The epitome of prescription writing remains as one of the many helpful features.

2nd Edition, 866 Pages. 127 Illustrations. 36 Tables. $10.00.

Washington Square **LEA & FEBIGER** Philadelphia 6 Pennsylvania

This book is an attempt to supply in one volume a survey of microbiology which will be sufficient for the needs of medical students. The enormity of the task is apparent by noting that the range of subjects which are covered runs the gamut from the history of bacteriology through discussions of such diverse organisms as bacteria, animal parasites and higher fungi to a chapter on detailed laboratory methods. Necessarily included are chapters on immunity, epidemiology, bacterial physiology, chemotherapy and others of broad applicability.

The book certainly presents the advantage that the student need not acquire two or three books to cover much material. Needless to say, one should not look for completeness nor profound discussions of basic problems in a work of this sort. However, medical students should find this volume a satisfactory text for the usual concentrated microbiology course.

The author is to be complimented on the many excellent illustrations. The book is outstanding in this regard.

W. R. Stinebring, *Pennsylvania*

The Principles and Practice of Medicine, 2nd edition

L. S. P. Davidson, M.D. E & S Livingston, Ltd. Edinburgh & London, 1954. 1036 pp. with index. $7.

This text is prepared solely by the staff of the department of medicine of the University of Edinburgh. It was originally published in 1952 to supplant mimeographed notes for students receiving a series of 80 to 100 systematic lectures at the beginning of their clinical studies.

Dr. Davidson has specifically excluded any section on any specialty commonly taught by an independent department. The second edition does include, however, a chapter of psychoneuroses which was not found in the first edition. It is evident that no attempt has been made to be encyclopedic in coverage; unusual diseases and syndromes are simply omitted. On the other hand a chapter on tropical diseases and helminthic infestation is an interesting feature.

The general organization of the text as a whole will be a little unusual to the average American reader. For example, chapters on nutritional disorders, chronic rheumatic diseases and tropical diseases are grouped together following the discussion of respiratory disease and preceding the chapter on disorders of the blood and blood-forming organs.

Organization and treatment of the material within each individual chapter is, however, admirably suited to the probable needs of the beginning student. Commencing with consideration of anatomy and physiology, the chapter moves on to symptomatology and management and generally concludes with some mention of measures available for prevention.

Physically the book is utilitarian in form, the print is legible and uncrowded on a good quality, unglazed paper. The cloth binding may have average durability. Excellent black and white line illustrations, generally of diagramatic or simplified line drawing style, are used generously and advantageously.

Too fragmentary for a definitive reference work, this text may be especially useful to the second and third year medical student.

Clark K. Sleeth, *Virginia*

Books and Pamphlets Received

(As space permits, those with the greatest interest to our readers will be reviewed)

Expanding Horizons in Medical Social Work

Dora Goldstine. University of Chicago Press, Chicago, 1955. 270 pp. $5.

Viral and Rickettsial Diseases of Man

Harvey Blank, M.D. and **Geoffrey Rake.** Little, Brown & Co., Boston, 1955. 263 pp. $8.50.

Biochemical Investigations in Diagnosis and Treatment

John D. N. Nabarro, M.D. Little, Brown & Co., Boston, 1955. 258 pp. $6.

Medical Care for Tomorrow

Michael M. Davis, Ph.D. Harper & Bros., New York, 1955. 434 pp. with appendices. $6.50.

The Clinical Examination of the Nervous System, 10th edition

G. H. Monrad-Krohn, M.D. Paul B. Hoeber, Inc. Medical Book Dept. of Harper & Bros., New York, 1955. 417 pp. with index. $7.50.

Reactions With Drug Therapy

Harry L. Alexander, M.D. W. B. Saunders Co., Philadelphia, 1955. 282 pp. with index. $7.50.

Peripheral Vascular Diseases, 2nd edition

Edgar V. Allen, M.D.; **Nelson W. Barker,** M. D.; **Edgar A. Hines Jr.,** M.D. W. B. Saunders Co., Philadelphia, 1955. 792 pp. with index

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Vol. I: Introduction, Upper Limb, Lower Limb $4.75
408 pp., 200 illus. (112 in color)
Vol. II: Thorax and Abdomen $4.75
498 pp., 236 illus. (129 in color)
Vol. III: Head, Neck and Brain $4.75
524 pp., 230 illus. (116 in color)

COPE / *The Early Diagnosis of the Acute Abdomen* — 10th Ed.

By ZACHARY COPE, M.D., *Surgeon to St. Mary's Hospital, Paddington.* This small volume, written for students, general practitioners and surgeons, is the authoritative work dealing with abdominal emergencies. ". . . has a place on the shelf of every student, surgeon and physician whose work may be even remotely related to pathologic conditions of the abdomen."—J.A.M.A. 274 pp., 39 illus. $4.00

FRANTZ & HARVEY / *Introduction to Surgery* — New 3rd Ed.

By VIRGINIA KNEELAND FRANTZ, M.D., *Professor of Surgery;* and HAROLD D. HARVEY, M.D., *Assoc. Professor of Clinical Surgery, College of Physicians and Surgeons, Columbia University.* This widely recognized textbook supplies excellently organized principles of surgery to students taking their first courses. Because emphasis is on fundamentals, with the approach simple and eminently teachable, the usefulness of this small volume has been proved beyond question. 246 pp., 15 illus. $4.00

HILL / *Principles of Medical Statistics* — New 6th Ed.

By A. BRADFORD HILL, D.Sc., Ph.D., *Professor of Medical Statistics, University of London.* By explaining statistical technique simply and clearly, the international authority, Dr. Bradford Hill, has supplied a much needed elementary textbook for medical students and workers in medical problems. Widely adopted in medical schools throughout the country. 320 pp., 44 tables. $4.00

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• Department of Pathology, University of Texas M.D. Anderson hospital and tumor institute, has openings for two or three senior pathologists from assistant to an associate level. Half of the individual's time can be spent on research and investigative work, the balance taken up with the usual service responsibility connected with a university teaching hospital. Address: William O. Russell, M.D., Pathologist-in-chief.

• PATHOLOGISTS: Positions available immediately for two assistant pathologists and one associate pathologist in a university teaching and cancer research center with 310 bed clinical facilities. Salary dependent upon qualifications. Address: V-28.

• RESEARCH ASSOCIATES: Postgraduate (M.D or Ph.D.) cardiovascular research and training program, supported by National Heart Institute and American Heart Association offered by departments of physiology and pharmacology, Medical College of Georgia. Stipend for one year program, starting July 1, 1955, is $3400 plus $350 for each dependent. Write Dr. W. F. Hamilton or Dr. R. P. Ahlquist, Medical College of Georgia, Augusta, Ga.

• PHYSIOLOGIST: Opening for instructor or assistant professor. Ph.D. or M.D. with research training. Preference for someone with medical school teaching experience and interests. Two-thirds of calendar year free for independent research. Address: Clarence A. Maske, Department of Physiology, University of Colorado School of Medicine, 4200 E. 9th Ave., Denver 20, Colo.

• ANESTHESIOLOGY RESEARCH FELLOWSHIP: Albany Medical College, for July 1, 1955. Training in cardio-pulmonary function laboratory, anesthesia research laboratory and experimental surgery laboratory. Subsidy of $3,000 to $3,600 depending on marital status. Address: J. Gerard Converse, M.D., Professor of Anesthesiology, Albany Medical College, Albany, N. Y., before April 15, 1955.

• ANATOMIST: Teaching duties mainly in microscopic anatomy. Prefer someone whose research interests are in histology or embryology. Salary and rank dependent on experience and qualifications. University Medical School, Pacific West Coast area. Address: V-29.

• M.D.—SCIENTIST: Wanted for staff appointment 1000 bed hospital; age preferably 30 to 40; minimum 2 years clinical experience diagnostic and therapeutic uses of radioisotopes. Excellent opportunity clinical research in academic atmosphere in completely equipped radioisotope research laboratory in medical center large city southwest U. S. Address: P. O. Box 17004, Houston 31, Texas.

• DIRECTOR RADIOISOTOPE UNIT: M.D., certified internist preferred. Splendidly equipped unit for clinical care of patients and research laboratory. Duties include administrative supervision, teaching in residency program, assistance other services in research. General hospital, 1000 beds, affiliated with medical college. Faculty appointment. Address: V-30.

• UNESCO has been asked to suggest candidates for the following posts abroad: Professorships in pathology, international medicine, surgery and ophthalmology (Tabriz, Iran). Professorships in physiology, chemistry, surgical dentistry and dental prosthetics (Baghdad, Iraq). Professorships in anatomy and physiology and lectureships in anatomy, physiology and pharmacology (Jerusalem, Israel). A number of professorships and lectureships in various preclinical subjects (Djakarta, Djocjakarta and others in Indonesia). Address: Enquiries and applications to UNESCO, Exchange of Persons Service, 19 avenue Kléber, Paris 16, France.

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Information for these columns should reach the Personnel Exchange, Journal of Medical Education, 185 N. Wabash Ave., Chicago 1, Ill., not later than the 10th of the month which precedes the month in which the listings will appear.

Personnel Available

• BIOCHEMIST: Ph.D., presently holds teaching and research position in a medical school. Desires position with teaching and research responsibilities. Address: A-137.

• PUBLIC RELATIONS DIRECTOR: 20 years experience in handling a variety of business and college public relations, specialist in interpreting scientific and technical topics, interested in connection with medical school or medical foundation where his energies and talents might be concentrated to better advantage. Address: A-139.

• PEDIATRICIAN: Board eligible. Three years clinical training in Eastern university centers. Some research experience. Desires academic position allowing part time practice. Small medical school preferred. Address: A-140.

• BASIC RESEARCH: Man, 30, veteran. Ph.D. Chemistry. M.D. June 1955. Experienced in teaching graduate and medical biochemistry, organic synthesis, tracer work, intermediary metabolism and medical therapy using radioactive isotopes. Publications. Address: A-141.

• ANATOMIST: Age 33, minor in physiology, requirements for Ph.D. completed except for some thesis work. Interested in teaching gross anatomy or physiology with time for research. Experience: assistant professor of biology, research in mammalian wecology, endocrinology, and circulation. Publications. Address: A-143.

• SURGERY: Residency for one year in general surgery sought by immigrant in Louisville, Ky. Married to an American. Internship expired Nov. 1954. Available Jan. 1, 1955. Prefer Louisville or vicinity. Address: A-144.

• BACTERIOLOGIST: Male, Ph. D., Harvard. Extensive teaching and research experience in medical bacteriology, general microbiology and applied immunology. Direct research: immunizing agents for bacterial and viral diseases; chemotherapy of virus infections, tuberculosis and malignancies; blood plasma fractionation and plasma volume expanders.

Closely associated with clinical evaluation of new chemotherapeutic agents, drugs and diagnostic aids. Member Sigma Xi and other scientific societies. Publications. Desires permanent teaching and/or research position, with or without administrative responsibilities. Address: A-145.

• BIOCHEMIST: M.D., Ph.D. Married, veteran. Sixteen years extensive experience in clinical biochemistry, research in biochemistry and endocrinology and in teaching. Publications. Extensive experience in medical editorial work.

Listed in American Men of Science and Who's Who in Medicine. Excellent references. Bogged down by administrative work and poor financial return. Wishes changes and desires teaching and/or hospital laboratory position with opportunities for research. Will consider editorial offers. Address: A-146.

• PHYSIOLOGIST: Ph.D. Now assistant professor Midwest medical school. Broad training physiology and physics. Fellowships. Teaching experience in medical and dental physiology, graduate biophysics. Active research on circulation in perfused organs under own grant; and aid in group studies in environmental stress. Extended experience in aviation physiology and applied physics, including many designs. Desires position in East with active teaching assignments, independence of research, chance to develop biophysics program for medical and graduate curriculum. Available Spring 1955. Address A-147.

• PHYSIOLOGIST: 30, family. Ph.D. June 1955. Research and teaching experience. Publications. Knowledge of biochemistry. Medical and zoological background in general and in mammalian physiology. Desires research opportunity with or without teaching. Special interests in cell metabolism and atherogenesis. Address: A-148.

• PHARMACOLOGIST-PHYSIOLOGIST: 31, veteran. Ph.D. Physiology and pharmacology, M.D. June 1955. Experienced in teaching pharmacology in university medical school. Broad training in classic mammalian pharmacologic techniques and biochemical procedures as they apply to determination of the mode of action of drugs. Desires teaching position with research opportunities. Will accept administrative duties. Publications, references. Address: A-149.

• ANATOMIST: Man, 27, married. Two children. Candidate for Ph.D. Research assistant to prominent histologist for two years on USPHS grant. One year graduate teaching assistantship in gross anatomy. Publications in gross and microscopic. Primary teaching interest in gross. Member AAAS and Sigma Xi. References. Address: A-150.

• MICROBIOLOGIST: Medical, Ph.D. 35. Considerable practical experience in all levels of medical teaching, diagnostic bacteriology, research in antibiotics, tuberculosis and administration. Desire academic or comparable stimulating position with future, in progressive institution. Resume on request. Address: A-151.

• NEUROLOGIST AND PSYCHIATRIST: M.D., Ph.D., 41. Fully qualified in both fields including EEG, long teaching experience, numerous senior hospital appointments. Associate professor for last five years, teaching clinical neurology, neurophysiology (two years), clinical psychiatry, psychotherapy, dynamic and abnormal psychology, psychophysiology.

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1. Cass, L. J. and Frederik, W. S.: Malt Soup Extract as a Bowel Content Modifier in Geriatric Constipation, Journal-Lancet, 73:414 (Oct.) 1953.

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• SURGEON: Board qualified July 1955. University trained. Teaching experience in anatomy, pathology and surgery. Desire full time academic appointment for teaching and research as well as clinical work. Address: A-153.

• HISTOCHEMIST: Man, Ph.D. Eight years experience research in histochemistry, histology, cytology and microscopic technics in well known university and medical school. High scholastic standard, Phi Sigma, Sigma Xi, publications. Desire teaching, research and/or laboratory supervision position in medical school, hospital or liberal arts college. available summer 1955. Address: A-154.

• BIOCHEMIST: 44, Ph.D. Desire two or three year appointment to project looking into problems of extrapulmonary ventilation or administration of volatile and gaseous anaesthetics. Some teaching preferred. Address: A-155.

• THORACIC SURGEON: 37, university-trained and qualified in general and thoracic surgery. Prefer limitation to thoracic and cardiovascular surgery. Experience in cardio-pulmonary physiology. Desire teaching position. Presently on surgical staff of eastern university. Eligible for boards in general and thoracic surgery. Completed Part I Boards in general surgery. Available after August 1. Address: A-156.

• INTERNIST-HEMATOLOGIST: M.D. Presently full-time assistant professor of medicine at large midwestern university hospital. Qualified for American Board of Internal Medicine. Member of Alpha Omega Alpha, American Federation for Clinical Research, American Association for Advancement of Science. Experienced clinician, teacher and investigator. Director of radioisotope laboratory. Numerous scientific publications. Interested in changing location, particularly West Coast, in academic position or private practice with teaching and research opportunities. Address: A-157.

• CHEMIST: Ph.D., minor in biochemistry, male, 10 years of research in medicinal chemistry, large pharmaceutical house. Publications, patents. Desires position in chemical-biochemical research in medical field. Particularly interested in position which would broaden experience by contact with other medical sciences. With or without teaching. Address: A-158.

• PHYSIOLOGIST: Ph.D., male, 30, family. Desires research and/or academic position in eastern part of U.S. Three years experience as research biologist with large eastern pharmaceutical company. Also teaching experience. Address: A-159.

• MICROBIOLOGIST: Medical, male, Ph.D., 37, married. Experience includes public health laboratory, industry (antibiotic research), and teaching all phases of medical microbiology. Present position associate professor microbiology in medical college. Wide research background in antibiotics, immunology, tuberculosis, bacterial dissociation. Have some training in use of isotopes. Desires teaching appointment with research opportunities in a medical school located south. Address: A-160.

• MICROBIOLOGIST: Ph.D., 30, presently assistant professor in medical school. Desires position in medical school in teaching and/or research with opportunity to complete work toward M.D. at least part time. Publications, associations, family, honorary societies. Ambition teaching and research in basic science. Address: A-161.

• ENDOCRINOLOGIST—PHYSIOLOGIST—ANATOMIST: with administrative experience desires position in graduate school of arts and sciences or medical school in teaching-research position. Harvard Ph.D.; seven years teaching-research experience, six years at Harvard. Extensive experience in endocrinology, general physiology, histology, medical genetics and zoological sciences. Interested in experimental medicine. Many publications. Membership in Sigma Xi, Kappa Delta Pi, Phi Sigma, N.Y.A.S., A.A.A.S., Amer. Soc. Zool., and others. Will accept administrative responsibilities. Address A-162.

• PHARMACOLOGIST: Ph.D., 26, married, two children. Director of research for established pharmaceutical company and medical student with part-time standing. Original publications, scientific societies, Soc. Experimental Biology and Medicine; American Federation for Clinical Research. Desires academic position with research possibilities while finishing medical school. Address: A-163.

• BACTERIOLOGIST: Male, 38, M.Sc., married. Seven years teaching and research experience in medical bacteriology. Desires part-time position with opportunity to work toward advanced degree. Present total college credit 200 semester hours. Present position an instructor in pathogenic bacteriology in medical school. Address: A-164.

• PUBLIC HEALTH AND PREVENTIVE MEDICINE: M.D. M.P.H. Fellow of the American Public Health Association, age 44, to be discharged from Army tour May 31, 1955. Desires to teach in a department of public health and preventive medicine, in a medical school. Six years experience in the practice of public health with some teaching experience, other experience in psychiatry and general practice. Address: A-165.

• ANESTHESIOLOGIST: 32, married, three children, veteran. Interested in heading a university anesthesia department. Five years experience in internal medicine before entering anesthesiology. Experienced in teaching and research. At the present time completing training at leading university hospital. Available December 1. Address: A-166.

• VIROLOGIST—BACTERIOLOGIST: Male, Ph.D., age 30. Teaching and research experience in medical bacteriology, general microbiology and virology. Tissue culture experience as applied to virology. Desires teaching position with opportunities for research. Address: A-167.

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